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Health Report

FOR

The City of Perth

For 1931

BY THE

Medical Officer of Health

PERTH:
PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1932.

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To the Honourable the Lord Provost, Magistrates and Members of the Town Council of the City and Royal Burgh of Perth.

Gentlemen,

I have the honour to submit my Thirty-third Annual Report upon the Health of the City of Perth for the year 1931.

Every endeavour has been made to make the Report as complete as possible, and all care taken to have the Charts and Tables accurate to the smallest detail. It is hoped, by the use of such Charts, that the Report may prove more interesting than would otherwise be the case.

*The mortality for the year—*14 *per 1000—while not a record, is a great advance of a few years ago, but what is most gratifying is that nearly one of every two deaths occurred in a person over 65 years of age. In other words 47 per cent. of the total deaths occurred in persons of advanced age.*

Further, Phthisis continues to record a very low death rate, viz., .402 per 1000, as compared with the record of last year, viz., .356. The Table included in the Report will show the decline which has occurred during the past 25 years; in fact, since 1899, there has been a decrease of over 50 per cent. of such deaths.

This year's infantile death rate—83 per 1000 births—while not constituting a record, is well below what has been considered as standard for a City, viz., 100.

C. PARKER STEWART,
M.O.H.

Rockville, Barnhill,
Perth, April, 1932.

Health Report for 1931.

AREA AND POPULATION.

THE registration area, as given by the Registrar-General, is 3,134 acres, while the population at the census was 34,807. This represents 11·1 persons to an acre. The additional acreage, due to the extension of the Burgh boundary in 1909, was 1,017 acres. The Ward populations and housing statistics are not yet available and the following statement is only provisional.

PROVISIONAL POPULATION—PERTH BURGH, 1931.

Population—Males	15,889	
Females	18,918	
		34,807
Occupied Houses		8,861
Unoccupied Houses		253
Rooms in Occupied Houses		33,676
No. of Rooms per Occupied House		3·80
No. of Persons per Room		1·03

BIRTHS.

The Births registered in the Burgh during 1931 were 614. This represents a birth rate of 17·6 per 1000 living, as compared with 16·3 in the previous year. Of these 614 births 324 were males and 290 were females, while 34 were illegitimate. The proportion of illegitimate births to total births was 5·5 per cent., as compared with 8 per cent. in the previous year.

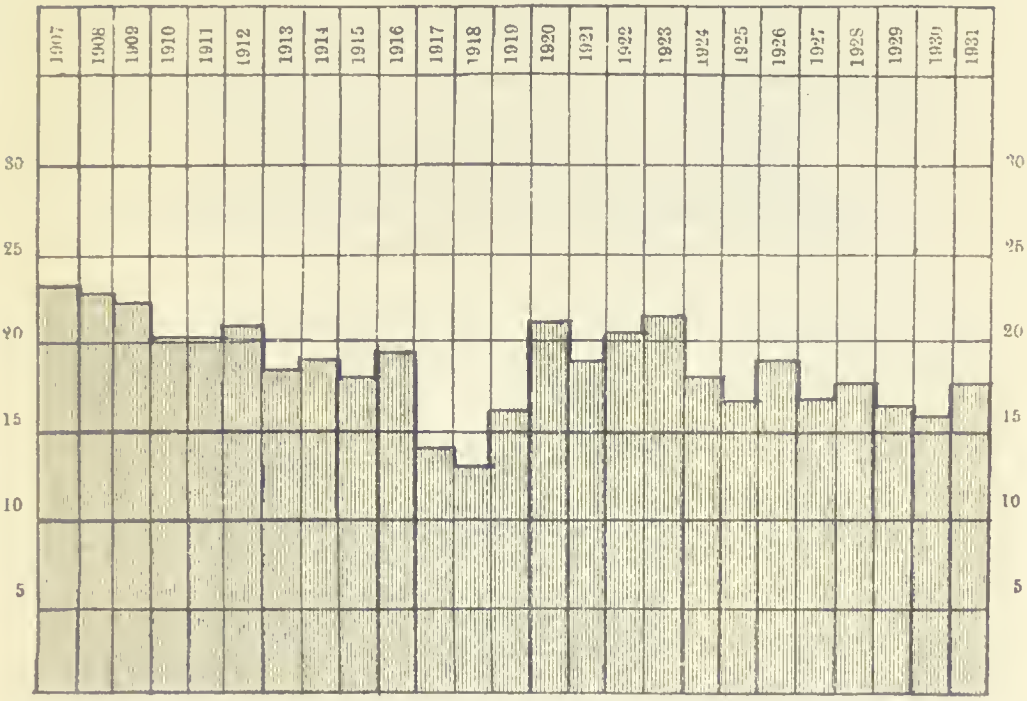
TABLE SHOWING THE NUMBER OF BIRTHS REGISTERED DURING EACH MONTH OF THE YEAR 1931.

MONTH.	Male.	Female.	Total.	Illegitimate.
January, ...	28	17	45	1
February, ...	23	27	50	3
March, ...	33	35	68	2
April, ...	25	14	39	1
May, ...	21	26	47	4
June, ...	23	26	49	5
July, ...	34	26	60	5
August, ...	29	22	51	4
September, ...	27	18	45	1
October, ...	29	31	60	4
November,... ...	20	20	40	3
December, ...	32	28	60	1
Total, ...	324	290	614	34 or 5.5 %

This is a very low birth rate although showing a increase over the previous year when it stood at 16·3.

An examination of the following Chart will show the steady decline which has taken place until the last few years. This declining birth-rate is a feature of all civilized races, and I stated in a previous Annual Report that I feared the upward tendency of the years following the war was not one which may be expected to continue.

CHART SHOWING THE BIRTH RATE PER 1000 IN THE CITY DURING THE PAST 25 YEARS.



It will be noted from the foregoing chart how steadily the birth rate declined until 1919—in fact in 1899 the birth-rate was 28·1 per 1000 as compared with 12·8 per 1000 in 1918, a decline during a period of 20 years of 50 per cent. From 1919 to 1923 the birth-rate increased, but since the latter date the tendency has been downwards.

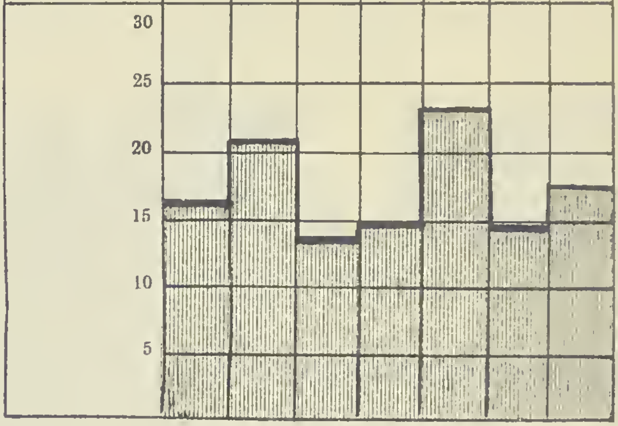
While the birth-rate for the whole of the City is 17·6 per 1000, it may be noted that in four Wards—viz., Wards 1, 3, 4 and 6—this birth-rate is less; while in the remaining Wards the birth-rate is above that of the City generally. In 1930 the City rate was exceeded in Wards 1, 2, 4 and 5.

Ward 5 has the highest birth-rate of 23·2 per 1000; Ward 1 has a birth rate of 16·3 per 1000; Ward 2 has a birth-rate of 20·8; Ward 3 has the lowest birth rate of 13·1; Ward 4 has a birth rate of 14·8, and Ward 6 has a birth-rate of 14·5 per 1000.

In 1930, Ward 5 had also the highest birth-rate while again Ward 3 has the lowest, the figures then being 19 and 10·2 respectively.

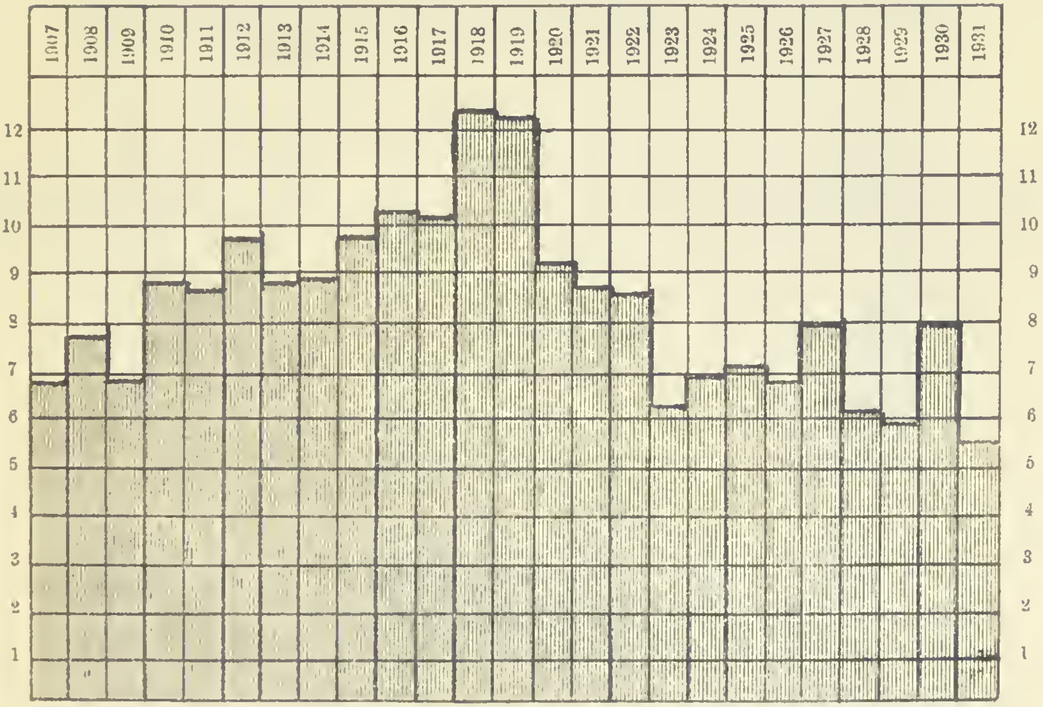
CHART SHOWING THE WARD BIRTH RATE PER 1000 OF POPULATION.

WARD	1	2	3	4	5	6	City Birth Rate.
ESTIMATED POPULATION	6420	7018	5543	5327	7068	3431	
NO. OF BIRTHS	102	146	73	79	164	50	



Connected with the birth-rate is the question of illegitimacy, and in looking back past years it may be noted that from 1899 to 1902 a gradual decline from 6·8 per cent. to 5 per cent. took place. From the accompanying chart it will be seen that from the latter year there tended to be a steady increase until it reached a record of slightly over 12 per cent. in 1918. In the year following the rate was very slightly lower, but in the succeeding years there was a considerable decline. During recent years the tendency has been the other way, and this year's figure stands at 5·5 per cent., as compared with 5·8 per cent. in 1929 and 6 per cent. in 1928, a figure considerably higher than one desires, but a great improvement over the period of 1910-1922 and the previous year. It is at the same time only right to state that this unsatisfactory phase in relation to births is more than a local circumstance. Associated with illegitimacy, unfortunately, is an increased infantile mortality. This is especially so during the first month of life, and is largely due to the fact that, in addition to the causes of death common to all infants, the mother of the illegitimate child is often under circumstances where she cannot do justice to her child and, it may be, even indifferent to its welfare.

CHART SHOWING PERCENTAGE OF ILLEGITIMATE BIRTHS DURING THE PAST 25 YEARS.



DEATHS.

The deaths registered in the Burgh during the year numbered 648, of which 179 were classed by our Registrar as rural, *i.e.*, persons dying within, but not belonging to the Burgh. There was one landward death.

TABLE SHOWING THE NUMBER OF CITY MALE AND FEMALE DEATHS DURING EACH MONTH OF THE YEAR.

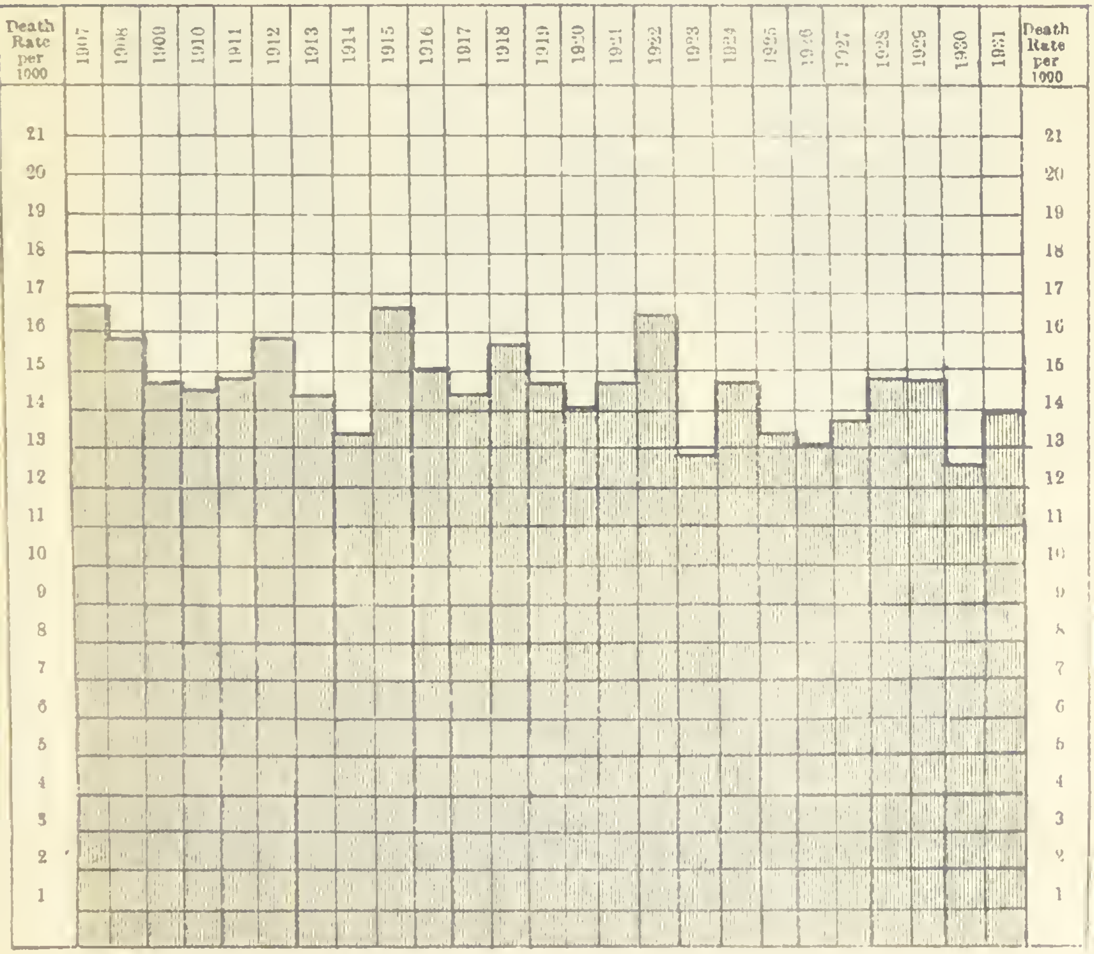
(Not including deaths of citizens without the Burgh.)

MONTH.	Male.	Female.	Total.
January, ...	31	40	71
February, ...	37	29	66
March, ...	24	26	50
April, ...	23	37	60
May, ...	20	28	48
June, ...	22	24	46
July, ...	24	35	59
August, ...	30	16	46
September, ...	27	18	45
October, ...	25	23	48
November, ...	23	33	56
December, ...	25	28	53
Total, ...	311	337	648
Rural, ...	101	78	179
Total of City, ...	210	259	469

After taking into account the deaths of citizens outside the Burgh boundaries, 19 in number, the annual mortality rate for the year is 14 per 1000, a figure which compares not only most favourably with the previous year when it was 14·8 per 1000 but constitutes a record for the City. Further, if we compare this year's death-rate with the death-rates of only 20 years back, one cannot fail to find satisfaction in the present existing state of matters. Then, 18 to 20 per 1000 and even over was the rule rather than the exception. In the preface to my Annual Reports of 1903 and 1906 I stated that these reports were not only the most satisfactory which it had been my province to submit, but, to the best of my knowledge, the most satisfactory which had ever been presented to the Local Authority—the annual mortality for the City being at the exceedingly low rate of 15·5 per 1000.

Again, in 1914, I was able to record that the death rate was only between 13 and 14 per 1000; while in 1930 the mortality rate was the lowest ever recorded in the annals of the City, viz., 12·6 per 1000. This year's rate though somewhat higher, especially considering that nearly 50 per cent. of deaths occurred among elderly people, shows that Perth has kept abreast of the times in things pertaining to the welfare of its inhabitants, more particularly when note is taken of the age periods of death.

CHART SHOWING THE DEATH RATE FOR THE PAST 25 YEARS.



One pleasing feature, which will be referred to again in more detail, is the fact that a large number of deaths occurred in old people, and it is gratifying to record that 46·9 per cent. of the total deaths occurred in persons over 65 years of age. In the previous year it was 51 per cent.

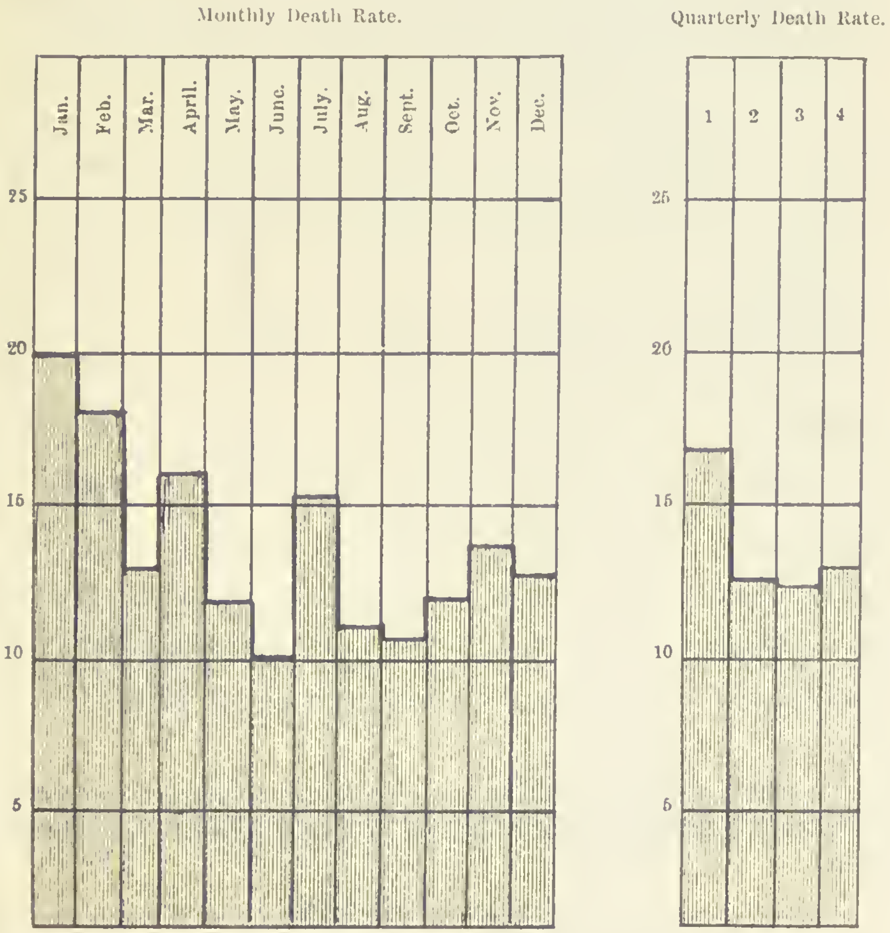
Looking at the monthly death rates, we find that the highest death rate was recorded in the month of January when it reached 20 per 1000. The next highest monthly return was in February, when it stood at 17·9, followed by April with 16·3 and July with 15·2. It will thus be seen that only on one occasion did the monthly mortality reach 20 per 1000 and even this during past years has been rare.

During January the most noticeable feature was the number of deaths attributable to diseases of the respiratory and circulatory systems, no less than 26 occurring from these causes mainly among elderly people, while deaths as a result of nervous diseases numbered 8. In this month 50 per cent. of the total deaths were over 65 years of age. In February, which had the second highest monthly mortality of 17·9 per 1000, a large number was attributed to circulatory and respiratory diseases, no less than 10 or just on 21 per cent. of the total deaths of this month being due to these two causes.

The lowest monthly rate occurred in June, and was 10·1 per 1000. Last year the month of April was the lowest, though as a rule the lowest monthly mortality has taken place in either July or September. During the month of April the most noticeable features were the continued fall in deaths from diseases of the respiratory systems, although no less than 3 infantile deaths occurred. The next two months with the lowest mortality were September and August with 10·8 and 11·5 per 1000 respectively.

In the following months the death rate was above the annual rate, viz. :—January, February, April and July, while in the remaining 8 months it was below.

CHART SHOWING THE MONTHLY AND QUARTERLY DEATH RATES PER 1000 OF POPULATION FOR THE YEAR 1931.



Annual Mortality Rate = 14 per 1000.

Looking at the quarterly death returns, which were, 1st quarter 16·9 per 1000, 2nd quarter 12·7, 3rd quarter 12·5 and 4th quarter 12·9, it may be noted that the first quarter was above and the other three quarters below the annual average. Compared with the previous year the quarterly death return is higher in every quarter, particularly the first.

WARD DEATHS.

TABLE SHOWING THE WARD DISTRIBUTION OF DEATHS, INCLUDING DEATHS OF CITIZENS OUTWITH THE CITY, DURING 1931.

DISTRICT.	Males.	Females.	Total.
Ward 1, ...	46	44	90
Ward 2, ...	33	54	87
Ward 3, ...	36	46	82
Ward 4, ...	29	38	67
Ward 5, ...	57	59	116
Ward 6, ...	19	27	46
Total, ...	220	268	488

The figures given exhibit, however, no true relative mortality between the different Wards, because the population is different in each.

The figures of the 1931 Census as regards Ward distribution not being yet available, I have arrived at an estimate of the Ward population, which I believe will give a fairly true index.

	Est. Pop.	Death Rate.	1930.
Ward 1,	6420	14 per 1000.	11·7 per 1000.
Ward 2,	7018	12·3 ,,	13·5 ,,
Ward 3,	5543	14·7 ,,	11·1 ,,
Ward 4,	5327	12.5 ,,	9·1 ,,
Ward 5,	7068	16·4 ,,	12 ,,
Ward 6,	3431	13·4 ,,	12·6 ,,

As compared with 1930 it will be noted that there has been a increased mortality in all the Wards, excepting Ward 2. The respective increases are as follows:—Ward 1, 1·3 per1000; Ward 3, 3·6 per 1000, Ward 4, 3·4 per 1000, Ward 5, 4 per 1000 and Ward 6, ·8 per 1000, while Ward 2 had a decrease of 1·2 per 1000. It will be noted that Ward 4 has the lowest death rate of the year. Last year Ward 4 had also the honour of being lowest.

TABLE SHOWING THE MORTALITY AT THE DIFFERENT AGE PERIODS IN THE VARIOUS WARDS FOR THE YEAR 1931

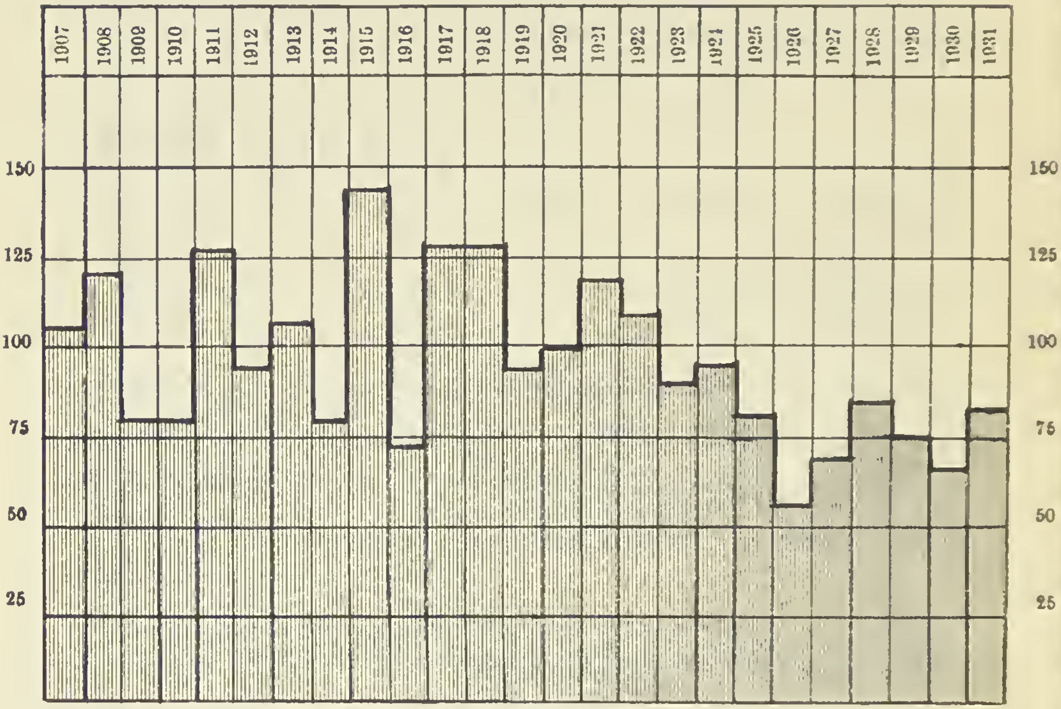
AGE.	Ward I.	Ward II.	Ward III.	Ward IV.	Ward V.	Ward VI.	Total.
Under 1 year, ...	11	7	2	10	13	6	49
1—5 years (Infant period), ...	1	3	...	2	7	...	13
5—15 years (School period), ...	2	1	2	...	..	1	6
15—25 years (Adolescent period), ..	2	7	3	1	2	3	18
25—45 years (Mature period), ...	9	9	11	9	12	1	51
45—65 years (Late-mature period), ...	26	18	17	12	24	8	105
65 and upwards (Post-mature period),...	36	39	43	30	56	23	227
Total, ...	87	84	78	64	114	42	469

INFANTILE DEATHS.

The number of infants who died under one year including two outwith the Burgh was 51, so that the infantile death rate, or proportion of deaths of infants under one year to the registered births, is 83 per 1000 births, and is equal to 10 per cent. of the total deaths, as compared with 64 per 1000 births in 1930. Last year the number of infantile deaths was 36, or 8·5 per cent. of the total deaths.

In reviewing the deaths of infants for the past 25 years, as can perhaps best be done by examining the following chart, it will be noted that on sixteen occasions the infantile death rate per 1000 births has been under the 100, the lowest recorded being 54 in 1926; on five occasions between 100 and 125, and on four occasions between 125 and 150. It is pleasing to record that during the past nine years the infantile rate has never reached the 100.

CHART SHOWING THE INFANTILE DEATH RATE PER 1000 BIRTHS DURING THE PAST TWENTY-FIVE YEARS.



As has been done now for several years, a printed card with instruction on "The Care, Feeding, and Clothing for Infants" is given by the Registrar to the person registering the birth of a child where no medical man has been in attendance. This card, which is supplied with a hook, so as to be easily hung on the wall, is willingly given to anyone interested in the welfare of infants.

Having always considered this portion of the death returns as very important, I have in previous years given a detailed account of these infantile deaths, and the following table exhibits in a concise manner the causes and periods of infantile deaths belonging to the City.

INFANTILE MORTALITY FOR THE YEAR 1931.

Including deaths without, but belonging to, the Burgh.

	CAUSES.	Under 1 day	2 days	3 days	4 days	5 days	6 days	7 days	Total under a week	Under 2 weeks	3 weeks	4 weeks	Total under 1 month	Under 2 months	3 months	4 months	5 months	6 months	7 months	8 months	9 months	10 months	11 months	Under 12 months	Total.
	Premature Birth - -	9	...	1	1	...	...	...	11	2	...	...	13	...	1	...	...	...	...	...	...	...	...	...	14
	Congenital Malformations	...	...	1	...	...	...	...	1	2	...	1	4	...	...	...	...	...	...	...	...	...	...	...	4
	Debility, Malnutrition -	1	...	...	...	...	...	...	1	1	3	1	6	1	...	1	1	...	...	...	...	...	...	...	9
	Convulsions - - -	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Diarrhœa, Gastritis, Enteritis, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2
Zymotic Diseases	Whooping Cough -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Measles - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Septicæmia - -	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1
	Erysipeles - -	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Respiratory Diseases -	...	...	...	...	...	...	...	...	1	...	1	2	1	1	...	...	...	...	1	1	...	1	1	8
	Tubercular Diseases -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Nervous Diseases - -	...	...	2	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
	Syphilis - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Overlain (Suffocation) -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Burns or Scalds - -	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Other Causes - -	...	...	...	1	...	1	2	4	1	...	...	5	1	...	...	...	...	...	...	...	1	...	...	7
	TOTAL - -	10	...	4	2	...	1	2	19	7	3	4	33	5	2	1	2	...	...	1	1	1	1	2	49

The total number of deaths on the *first* day was 10. This is 6 more than the number of last year. As a rule, of the deaths during the first week the majority occur on the first day, and this is fully borne out in the preceding table, 52 per cent. of the deaths, occurring in the first week of life, taking place on the first day.

The number of deaths within the *first* week was 19, being 8 more than that of last year at this period. This means that, of all the children who died under one year of age, every third one died during the first week of infancy.

The cause of this percentage of deaths within the first week will be gathered from a consideration of the diseases which occasioned the deaths, many of the causes no doubt being attributed to maternal conditions.

During the *second* week there is a marked decline, seven deaths being recorded at this period. As a rule, each succeeding week during the first month shows a decline as compared with the week before, but this year the numbers of the third and fourth weeks were three and four respectively.

The number of deaths within the **first** month was 33, showing an increase of 14 as compared with last year, and is equivalent to 66 per cent. of the total infantile deaths, a higher percentage than in the previous year, viz., 52 per cent.

As a result largely of the great number of deaths during the first and second weeks, the deaths during the first month are greatly in excess of any succeeding month, being six times the number of any succeeding month. In the previous five years this was also the case.

The large percentage of infantile deaths during the first month is easily explained by glancing at the *causes* of death, where it will be seen that Premature Birth accounted for 39 per cent., and Congenital Debility for 18 per cent. of all deaths at this early period. This is above the percentage of last year. If to these cases there be added the cases which died as the result of congenital malformations at birth, we find that of the infants dying during the *first* month no less than 69 per cent. were attributable to one or other of these causes. Of the remaining deaths at this period, two were attributed to nervous diseases and respiratory diseases. No less than 14 infantile deaths were attributed to Premature Birth during the year, as compared with 1 in 1930.

As regards the houses in which the infantile deaths occurred, it may be mentioned that 4 took place in the High Street, 3 in South Street, 2 in Burghmuir and Canal Crescent, and the remainder in different parts of the City. For the third sucessive year not a single infantile death occurred in the Meal Vennel.

As regards occupations of Parents, the most prominent was that of labourers. followed by that of railway employees. There was not a case of a domestic servant. In former reports one had to deal with a fair number of deaths of infants whose mothers were servants and whose infants had been farmed out.

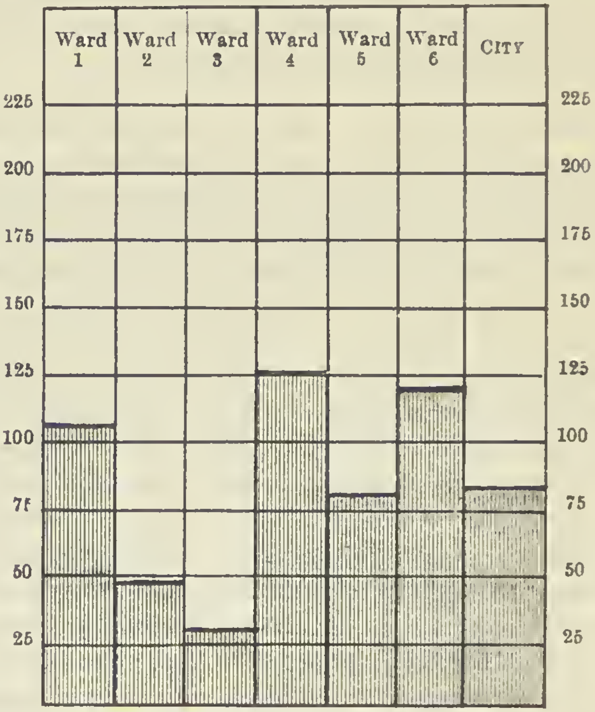
Another point may be noted, viz., that the death rate among the illegitimate is, as might be expected, considerably higher than among the legitimate. The number of legitimate births during the year was 580. Of these, 46 died—a percentage of 8 per cent. The illegitimate births were 34, with a death roll of 5, being equivalent to 14 per cent. Such figures would indicate two things, either that the class of parents of illegitimate children is of a very low order from a health point of view, or what is much more likely—is that the illegitimate child does not receive the kindly consideration and care which a legitimate child gets. Now, if the prevention of mortality of legitimate children is a difficult problem, this prevention among the illegitimates is undoubtedly much more difficult, and the knowledge that the death rate among the latter is considerably more than that of the legitimate must be looked sternly in the face. Many of these infants may not be wanted but the child is not worthless, much less is it illegitimate, and it is to be borne in mind that the nation's greatest asset is its children, and if in the past it was the "cry" of the man and the woman, the present time is the "cry" of the child. Notwithstanding, it is only right to say that the figure of 14 per cent. compares very favourably with the record of previous years. How much this is due to the Child Welfare Centre it is difficult to say, but in any case the work done by the Health Visitors is most useful, and they have done much to counteract the evils so often arising from ignorance, carcless ness, and indifference.

Considering these infantile deaths from a Ward point of view, and in relation to the births in each Ward, we find that

					1930.
Ward 1	has an infantile	death rate of	107	per 1000 births	54
,, 2	,,	,,	48	,,	67
,, 3	,,	,,	27	,,	18
,, 4	,,	,,	126	,,	31
,, 5	,,	,,	79	,,	100
,, 6	,,	,,	120	,,	106

the infantile death rate for the whole City being 83 per 1000 births.

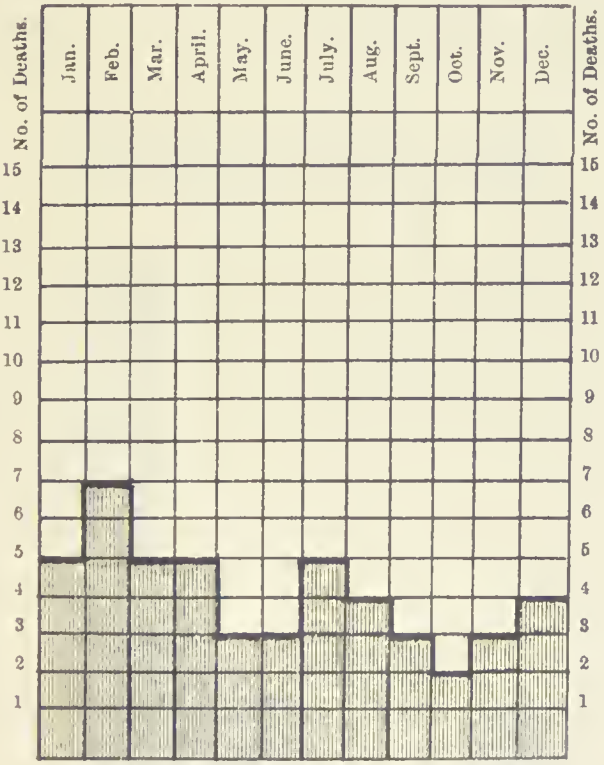
CHART SHOWING THE INFANTILE DEATH RATE PER 1000 BIRTHS IN THE VARIOUS WARDS AND CITY.



Thus with the exception of Wards 2 and 5 there has been an increase in the infantile death rate. This is particularly noticeable in the case of Ward 4 where the rate jumped from 31 to 126, and in Ward 1 from 54 to 107. The only other Ward to exceed the 100 was Ward 6, a circumstance which also happened in the previous year. The highest rate was recorded in Ward 4 and the lowest in Ward 3. Wards 2, 3 and 5 were below the average of the city, the others being above.

The following chart is interesting as showing how the infantile deaths vary throughout the year. In five months, viz., January, February, March, April and July, the number was above the monthly average, while in the remaining months it was below. The greatest monthly number was in February, viz., 7, followed by January, March, April and July, with 5. In the month of October two deaths were recorded. It is rather remarkable that 34 per cent. of the total infantile deaths should have occurred in the first quarter of the year as compared with 18 per cent. in the last quarter, while it is interesting to note that during each of the first four months of the year the number, as might be expected, is above the average, but during the last five months is below.

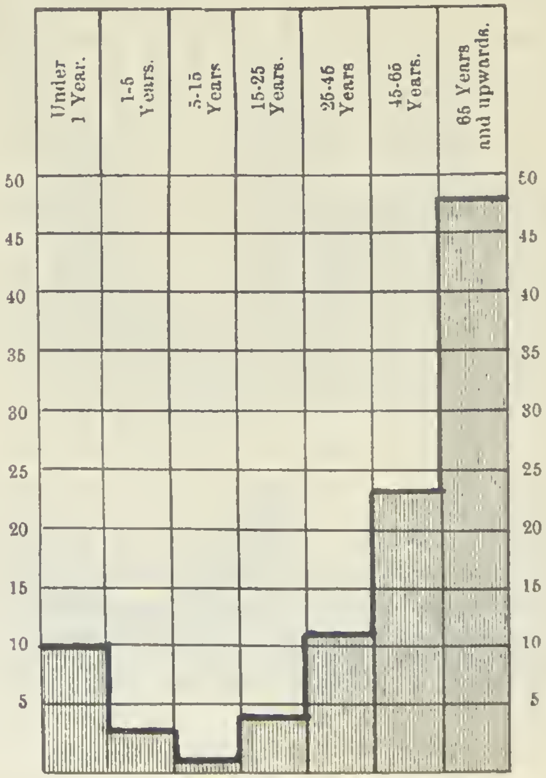
Chart showing Seasonal Infantile Mortality during 1931.



OTHER AGE PERIODS.

Including the deaths of citizens outwith the Burgh the deaths of children between 1 and 5 years were 15, being equivalent to 3 per cent. of the total deaths; between 5 and 15 years (school period) 6 or 1·2 per cent.; between 15 and 25 years (adolescent period) 21 or 4·3 per cent.; between 25 and 45 years (early mature period) 52 or 10·6 per cent.; between 45 and 65 years (late mature period) 114 or 23·3,per cent.; and at 65 years and upwards (post mature period) 229 or 46·9 per cent. Compared with last year the percentage of deaths at the post-mature period has shown a decrease, when it was 51·4 per cent. Of these post-mature deaths 48 were between 65 and 70 years, 111 between 70 and 80 years, 64 between 80 and 90 years, and 6 between 90 and 100 years, the oldest age recorded during the year being 95 years.

Chart Showing the Mortality at the Different Age Periods as Percentage of the Total Deaths.



CAUSES OF DEATH.

(1.) ZYMOTIC DISEASES.

The number of deaths ascribed to zymotic causes, including those from septic causes—Septicæmia, Pyæmia, Puerperal Fever, and Erysipelas—and those from Diarrhœa, Gastritis, and Gastro-Enteritis, as well as those from Venereal disease, was 30, which is equivalent to a death rate of ·86 per 1000 persons living.

TABLE SHOWING THE MORTALITY FROM PRINCIPAL ZYMOTIC DISEASES AT THE DIFFERENT AGE PERIODS.

DISEASE.	Under 1 Year.	1-5 Years.	5-15 Years.	15-25 Years.	25-45 Years.	45-65 Years.	65 and upwards.	Total.	Death Rate per 1000.	1930	
										Total.	Death Rate per 1000.
Chickenpox	...	...	...	...	...	...	...	...	...	1	·029
Erysipelas -	1	...	...	...	...	...	...	1	·028	3	.089
Diphtheria -	...	1	2	...	...	...	...	3	·086	2	·059
Scarlet Fever	...	...	...	...	...	...	...	...	..	...	...
Cerebro-Spinal Fever	...	..	...	...	...	...	...	...	...	...	...
Measles -	...	...	...	...	...	...	...	...	...	1	·029
Whooping Cough	...	2	...	...	...	...	...	2	·057	...	...
Influenza -	...	...	...	..	2	2	3	7	·201	3	·089
Diarrhœa, including Gastritis and Enteritis	2	1	1	...	...	...	2	6	·172	5	·148
Venereal Diseases	1	...	...	..	1	...	...	2	·057	4	·118
Epidemic Encephalitis	...	..	...	...	..	1	..	1	·028	...	...
Puerperal Fever	..	...	...	2	1	...	...	3	·086	4	·118
Septicæmia -	1	*1	...	...	3	...	...	5	·143	1	·029
Total -	5	5	3	2	6	3	5	30	·86		
1930 -	6	1	2	3	4	5	2	24	·70	...	...

* Case died outwith the Burgh.

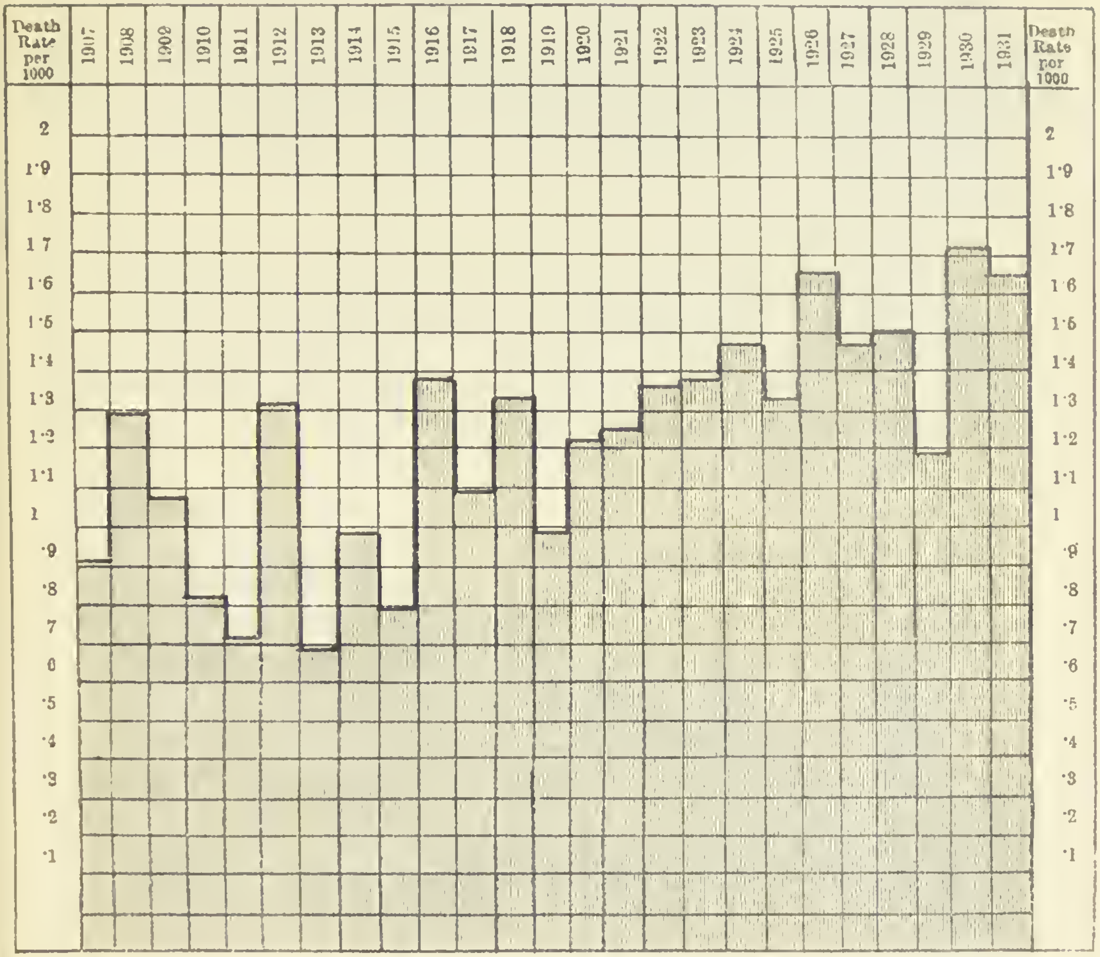
From the foregoing it will be seen that there has been a slight increase in the zymotic death rate, having risen from ·70 of the previous year to ·86. The main increases have occurred in the following diseases—Septicæmia from ·029 to ·143, Whooping Cough from 0 to ·057, and Influenza from ·089 to ·201. On the other hand Erysipelas and Puerperal Fever decreased—the former from ·089 to ·028 and the latter from ·118 to ·086. Diphtheria showed a slight increase, viz., ·086 per 1000, as compared with ·059 in 1930. One death was attributed to Syphilis, as compared with four of last year. No deaths were attributed to either Scarlet Fever, or Cerebro-Spinal Fever throughout the year.

(2.) CONSTITUTIONAL DISEASES.

The deaths from this class of disease, including deaths outwith the Burgh, numbered 96, representing a proportion of 2·75 per 1000 living.

Cancer is the principal disease. In 1912 deaths from Cancer for the first time outnumbered those resulting from Consumption. and this year has been more than repeated, in fact the deaths number four times those of Phthisis. It appears evident from a study of mortality tables for past years that this disease tends to be on the increase, the deaths this year being only one less than the record of the previous year. The deaths from Cancer, including five from outwith the Burgh, numbered 57, and were equivalent to a death rate of 1·63 per 1000, as compared with 1·72 per 1000, in 1930.

CHART SHOWING THE DEATH RATE FROM CANCER OR MALIGNANT DISEASE DURING THE PAST TWENTY-FIVE YEARS.



Phthisis, or tuberculosis of the lungs, which used to be classed as a constitutional disease, has been a notifiable disease since 1912. During the year 14 deaths occurred from this cause. One occurred between 5 and 15 years, 2 between 15 and 25 years, 8 between 25 and 45 years, 2 between 45 and 65 years, and one above 65 years. This is 2 more than in the previous year, and based on the estimated population of 34,807, is equivalent to ·402 per 1000, as compared with ·356 in 1930.

The percentage of deaths to total deaths was 2·8, and the death rate as stated was equivalent to ·402 per 1000 persons living. Compared with the corresponding figures of 1900, the occasion of my first report, viz., 9·2 percentage to total deaths and a death rate of 1·9 per 1000, it will be evident, especially after a glance at the following chart, that the factors which made this disease to be classed as the "white scourge" are slowly but surely being got under control.

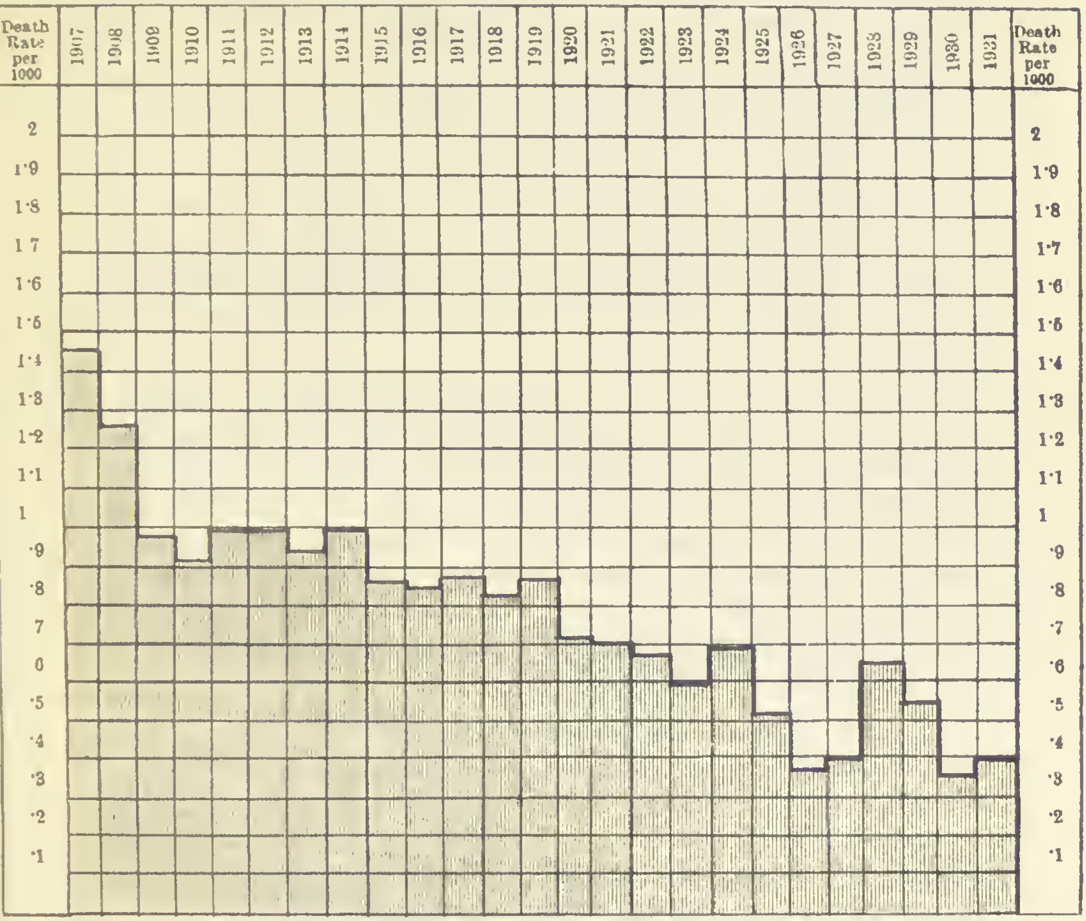
The Ward distribution of these deaths was as follows:—Ward 1, 5 deaths; Ward 2, 5 deaths; Ward 3, 3 deaths; Ward 4, *nil*; Ward 5, 1 death; Ward 6, *nil*. If we judge these figures by the respective population of each Ward, we find that—

				1930.
Ward 1	has a consumptive death rate of	·77	per 1000.	·64
Ward 2	,, ,, ,,	·71	,,	·29
Ward 3	,, ,, ,,	·54	,,	·18
Ward 4	,, ,, ,,	—	,,	·19
Ward 5	,, ,, ,,	·14	,,	·29
Ward 6	,, ,, ,,	—	,,	·60

If all forms of tuberculosis are considered, the figures for the Wards in their numerical order are 1·0, ·99, ·54, ·18 ·28, and 0 per 1000.

The death rate from this cause is slightly above the record for the City, and a glance at the following chart will show how satisfactory has been the decline during the past years.

CHART SHOWING THE DEATH RATE FROM PHTHISIS DURING THE PAST TWENTY-FIVE YEARS.



In 1920 an important administrative change occurred with regard to the treatment of insured persons suffering from tuberculosis. Formerly it fell to the Local Insurance Committee to provide treatment for insured phthisical patients, but in that year the duty was placed on the Local Authority. This implies the provision of institutional treatment or domiciliary treatment, and the payment of medicines incurred under the treatment of their own doctor at home. The Local Authority are now responsible for the care of all forms of tuberculosis.

(3.) LOCAL DISEASES.

The number of deaths registered under this class was 278. These causes give a death rate of 7·9 per 1000, as compared with 8·4 in 1930. No deaths were attributed to diseases of the lymphatic system, or organs of locomotion, or organs of special sense, but one occurred from disease of an organ of parturition.

As has been the case in previous years, deaths from nervous, respiratory and circulatory causes are the most prominent.

As regards respiratory troubles, Broncho-Pneumonia is the commonest, followed by Bronchitis and Pneumonia. 7 deaths of infants, 2 deaths of children between 1 and 5 years of age, and 33 deaths of persons over 65 years of age occurred from pulmonary trouble. The total number of deaths was 61, being 14 more than in the previous year.

Attention has already been drawn to the number of infantile deaths from respiratory disease, and when we add to that number the number of those dying between the age of one and five years, we have a total of 11—a figure 5 more than last year, and the same as in 1929, though 9 less than in 1928. It appears to give proof of carelessness or ignorance on the part of parents that 15 per cent. of infantile deaths and 23 per cent. of deaths between 1 and 5 years should result from Respiratory trouble. The respective percentages last year were 8 and 16.

Nervous diseases account for 60 deaths. No less than 45 deaths took place from apoplexy, and of these the great majority occurred in people over 60 years of age; in fact, no less than 32 occurred in persons over 65. As regards diseases of the Circulatory System, 33 deaths were attributed to heart disease and 12 to syncope, and a large number to disease of the arteries.

(4). VIOLENCE.

The number of deaths attributed to "violent" causes during the year was 15, being 3 less than in 1930. Not one was due to a railway vehicle, but no less than 4 were the result of motor accidents, the same number as in 1930. Drowning was the cause in 1 instance, while 3 deaths arose as the result of fall, &c. No death occurred in an infant from overlying, but 1 death resulted in a child from burns or scalds. There were 3 cases of lysol poisoning and 2 from coal gas poisoning.

The cases attributed to suicide were 1 more than last year and numbered 6, and 4 more than in 1929.

Of these 15 "violent" deaths, 4 occurred outwith the Burgh.

SUMMARY OF DEATHS (INCLUDING DEATHS OF CITIZENS OUTWITH THE CITY).

	1931	1930
I. SPECIFIC FEBRILE OR ZYMOTIC DISEASES—		
1. Miasmatic Diseases	13	7
2. Diarrhœal (Enteritis, etc.)	6	5
3. Malarial	—	—
4. Zoogeneous	—	—
5. Venereal	2	4
6. Septic	9	9
II. PARASITIC DISEASES	—	—
III. DIETETIC DISEASES	—	1
IV. CONSTITUTIONAL DISEASES ..	96	85
V. DEVELOPMENTAL DISEASES ...	52	39
VI. LOCAL DISEASES—		
1. Diseases of Nervous System ...	60	65
2. Diseases of Organs of Special Sense ...	—	—
3. Diseases of Circulatory System ...	110	83
4. Diseases of Respiratory System ...	61	44
5. Diseases of Digestive System ...	27	16
6. Diseases of Lymphatic System and Ductless Glands	—	—
7. Diseases of Urinary System ..	15	17
8. Diseases of Organs of Generation ...	1	—
9. Diseases of Organs of Parturition ...	1	3
10. Diseases of Locomotary System ...	—	—
11. Diseases of Integumentary System ...	—	—
VII. VIOLENCE—		
1. Accident or Negligence	9	13
2. Suicide	6	5
VIII. ILL-DEFINED OR NON-SPECIFIED CAUSES	20	21
Total	488	420

NOTIFIABLE INFECTIOUS DISEASE.

The total number of notifiable diseases recorded during the year 1931 was 351, as compared with an average of 397 in the previous ten years.

TABLE SHOWING THE WARD DISTRIBUTION OF CASES NOTIFIED DURING THE YEAR 1931, WITH NUMBER OF CASES TREATED IN HOSPITAL.

NATURE OF DISEASE.	WARD 1.		WARD 2.		WARD 3.		WARD 4.		WARD 5.		WARD 6.		Treated in Hospital	Treated in Home	Total
	Under 5 years	5 years & over	Under 5 years	5 years & over	Under 5 years	5 years & over	Under 5 years	5 years & over	Under 5 years	5 years & over	Under 5 years	5 years & over			
Chickenpox, ...	9	6	4	4	3	9	1	11	6	16	1	8	...	78	78
Typhoid Fever, ...	...	1	..	..	...	1	...	. .	...	1	...	...	3	...	3
Ophthalmia Neonatorum,	2	...	...	...	...	...	1	...	3	...	...	...	4	2	6
Pneumonia, ...	2	3	1	2	...	3	...	3	...	3	..	1	4	14	18
Scarlet Fever, ...	1	7	2	6	1	6	6	13	5	15	...	13	59	16	75
Diphtheria, ...	3	8	...	17	1	15	4	10	1	15	2	7	76	7	83
Erysipelas, ..	...	6	1	5	...	8	...	6	...	3	...	5	7	27	34
Phthisis, ...	...	7	...	3	...	7	...	2	..	3	...	1	13	10	23
Tuberculosis other than Phthisis,	1	8	...	4	...	1	1	1	2	2	..	2	16	6	22
Encephalitis Lethargica	...	...	...	1	..	...	...	...		..	...	...	...	...	1
Puerperal Fever, ...	...	...	...	...	...	1	...	4	...	1	...	2	7	1	8
Cerebro Spinal Fever,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	18	46	8	42	5	51	13	50	17	59	3	39	190	161	351
TOTAL, ...	64		50		56		63		76		42				

As compared with the previous year there have been 101 less cases notified.

I am glad to report that there has been no recurrence of Smallpox or Typhus Fever. It is thirty years since there was a case of the latter disease in Perth, and then it was a case of a tramp from Glasgow. One case of Sleeping Sickness and none of Cerebro-Spinal Fever was notified. After a period of four years without a case of Typhoid Fever three cases were notified during the year. Of cases of Puerperal Fever, including those of Puerperal Pyrexia, there were eight reported.

The average monthly number of cases was 29, being exceeded on six occasions, these occurring in the first seven months of the year excepting the month of May. The largest number of cases was reported in February and March (the result of the large number of cases of Chickenpox and Diphtheria during this period) the number for these months being 50 and 41 respectively. The smallest number occurred in December, when only 10 cases of infectious disease were notified, followed by 16 and 20 in August and October. The percentage of cases during the various quarters of the year were—1st quarter, 35 per cent.; 2nd quarter, 28 per cent; 3rd quarter, 22 per cent.; 4th quarter, 14 per cent.

As regards the age period, 65 were under 5 years of age, and 285 above that period. Last year the number affected at the infant period was 25 per cent. of the total. This year the percentage has decreased, having fallen to 18 per cent. Of the infant cases 36 per cent. were Chickenpox, 23 per cent. Scarlet Fever, and 18 per cent. Diphtheria.

The number of these notifiable cases, including one or two cases in the Infirmary, treated in Hospital or Sanatorium was 190, or 54 per cent. of the total cases, as compared with 55 per cent. in the previous year.

With reference to the Ward Distribution of these Infectious Diseases, if we consider (which is the proper way) the cases as so many per 1000 of the population of each Ward (or better still, were that possible, as so many per 1000 of the young people in each Ward) we find that Ward 2 with 7·1 per 1000 stands for the year as the Ward freest from infectious trouble, while Ward 6, with 12·2 per 1000, was the most affected.

The figures for the various Wards are:—

		1930
Ward 1 =	9·9 per 1000 of estimated population,	12·3
Ward 2 =	7·1 ,, ,, ,,	13·2
Ward 3 =	9·6 ,, ,, ,,	10·4
Ward 4 =	11·8 ,, ,, ,,	18·9
Ward 5 =	10·7 ,, ,, ,,	16·2
Ward 6 =	12·2 ,, ,, ,,	7·5

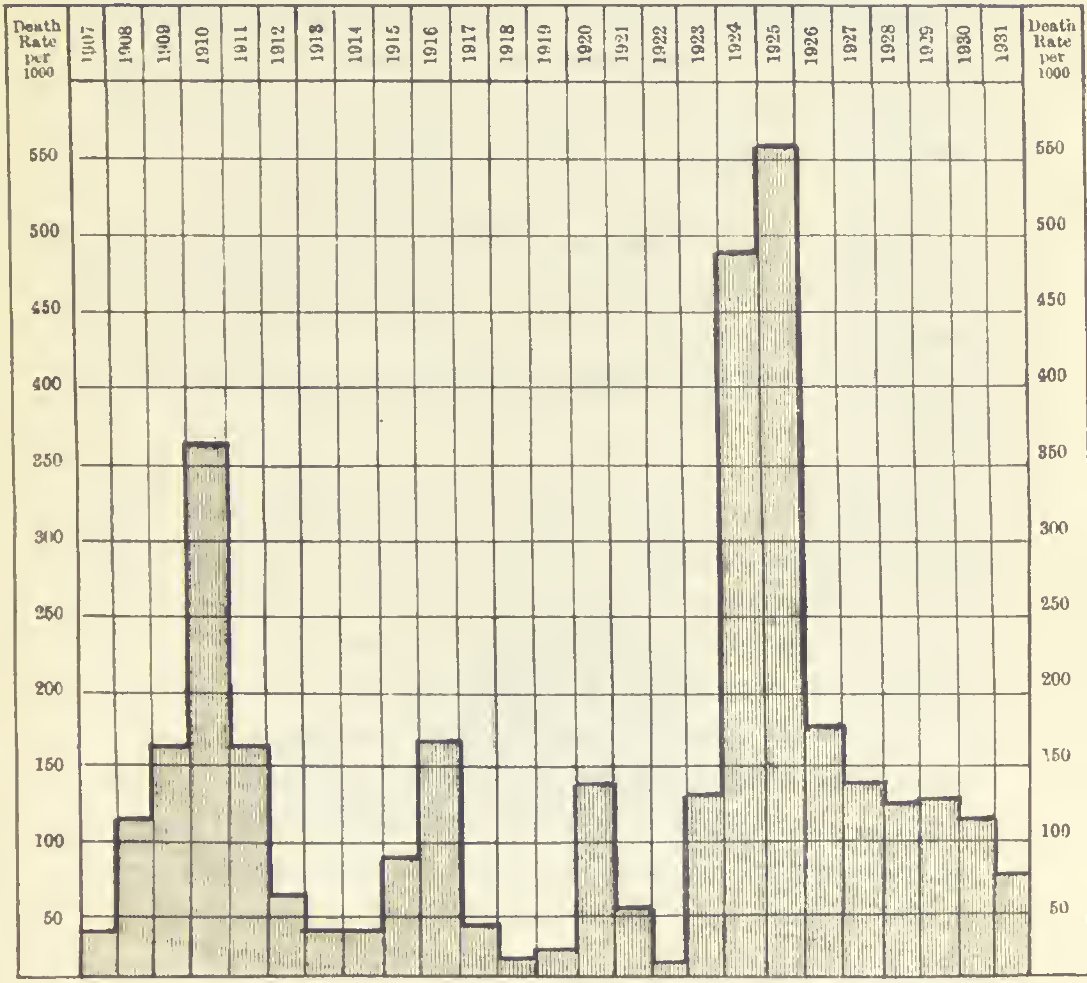
Ward 2 was the freest from infectious disease, while Ward 6 instead of being the lowest as in 1930 this year is the highest.

TABLE SHOWING THE PERCENTAGE OF CASES TREATED IN HOSPITAL DURING 1931.

DISEASE.	Total.	Treated in Hospital or Sanatorium.	Percentage of Cases treated in Hospital.
Chickenpox, ...	78	...	...
Typhoid Fever, ...	3	3	100
Oph. Neonatorum, ...	6	4	66
Pneumonia, ...	18	4	22
Scarlet Fever, ...	75	59	78
Diphtheria, ...	83	76	91
Erysipelas, ...	34	7	20
Encephalitis Lethargica	1	1	100
Phthisis, ...	23	13	56
Tuberculosis (other than Phthisis),	22	16	72
Puerperal Fever, ...	8	7	87
Cerebro Spinal Fever	...	...	...
Dysentery	...	...	...
Total, ...	351	190	54

SCARLET FEVER.

Chart showing the Number of Cases of Scarlet Fever notified during the past Twenty-Five Years.



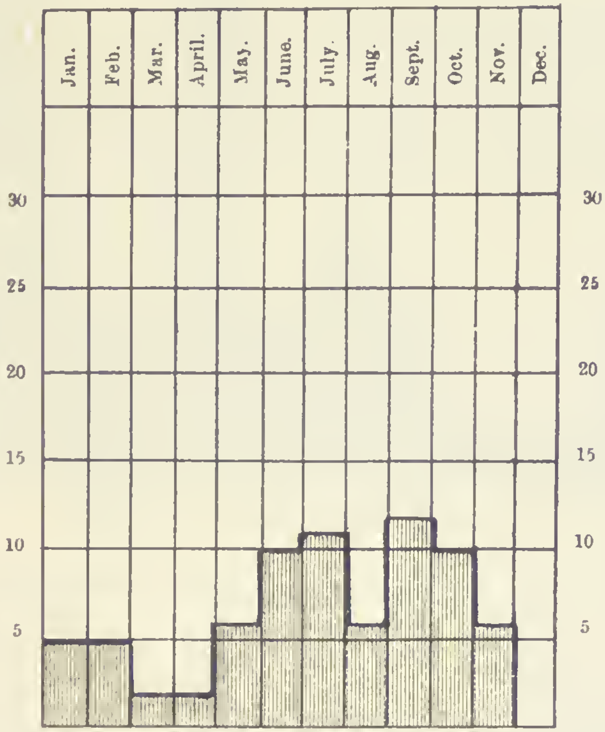
A glance at the chart recording the cases during the past twenty-five years will clearly show the tendency of this disease to lie more or less quiescent for some years and then manifest itself.

In 1922 only 19 cases were notified, followed in the following year with 138. In 1924 there was an increase of 357. In the following year there was a further increase, this figure being exceeded by 68, viz.:—563, and constituting a record in the annals of the City. In 1926 there was, as was to be expected, a marked decrease, the number having fallen to 172, or 391 less than in 1925, followed in 1927 with 140 cases. In 1928 the number had further declined to 116. This year gave 75 cases, and it is fully to be expected that the coming year or two will see a progressive increase.

It will be noted from the monthly chart, the disease was most prevalent in the third quarter of the year. The lowest point reached was during the month of December, when no cases were recorded, followed by the months of March and April with only 2 cases.

During the first quarter of the year there were 12 cases or 16 per cent., while in the second quarter the cases numbered 18 or 24 per cent. The third quarter, with its 29 cases, was equivalent to 38 per cent., while the fourth quarter with 16 had 19 per cent. of the total cases. The greatest number in any one month occurred in September, when 12 cases, or 16 per cent. of the total. were notified. This was followed by the months of July with 11 and June and October when there were 10 cases. As already stated, the lowest number in any single month, apart from December when no case occurred, was in the successive months of March and April when 2 cases were reported.

CHART SHOWING THE NUMBER OF CASES OF SCARLET FEVER DURING THE YEAR 1931.



As regards the sex, 38 cases occurred among females and 37 among males; while as regards the age period, 15 occurred among children under 5 years of age, or 20 per cent. This is a higher percentage than the previous year, when it stood at 30 per cent. As regards the other age periods, 51 or 68 per cent. occurred between 5 and 15 years, 4 or 5 per cent. between 15 and 25 years, and 5 or 6 per cent. between 25 and 45 years

As regards the Ward Distribution, Ward 2 was the lowest with 1·1 per 1000, followed by Wards 1 and 3 with 1·2 per 1000. Ward 6, followed by Ward 4, had the highest. The figures relating to the various Wards for 1931, with comparison for 1930, are as under:—

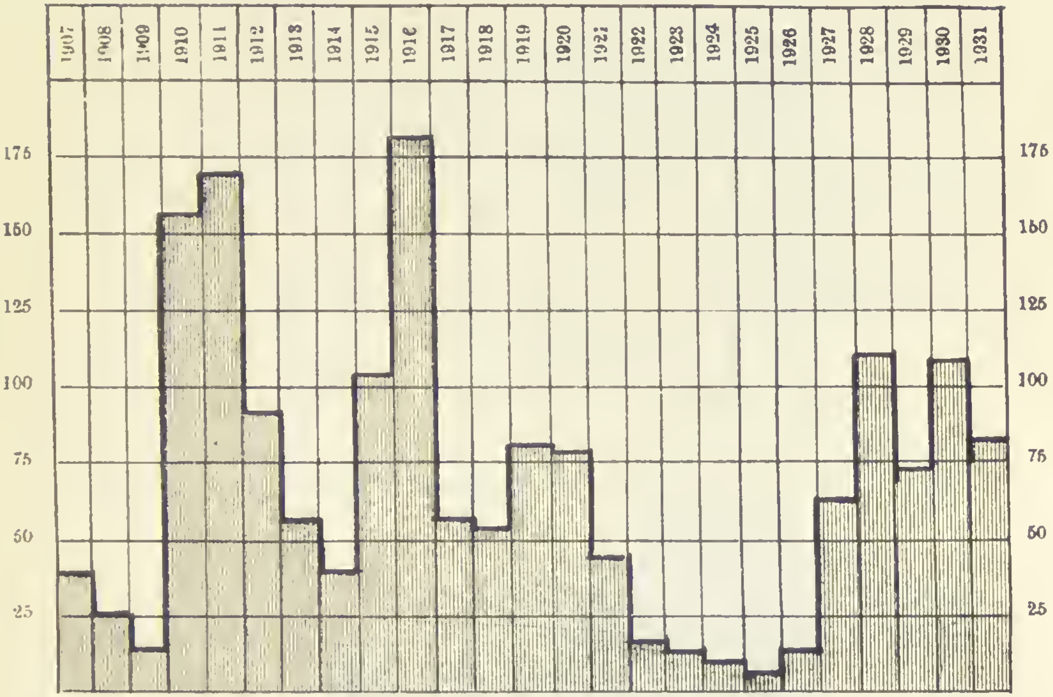
		Cases.		1930.
Ward 1	...	8	or 1·2 per 1000,	1·9 per 1000.
Ward 2	...	8	or 1·1 ,,	2 ,,
Ward 3	...	7	or 1·2 ,,	1·8 ,,
Ward 4	...	19	or 3·5 ,,	6·9 ,,
Ward 5	...	20	or 2·8 ,,	5·2 ,,
Ward 6	...	13	or 3·7 ,,	1·5 ,,
		75		

The number removed to Hospital was 59, or 78 per cent. of the whole. In the previous year the percentage was 84.

Although there were several cases in which the type of fever was virulent, with a corresponding degree of complications, it is pleasing to report that not a single death resulted from this cause throughout the year. As a matter of fact this is the third year in succession in which there has been no fatality.

DIPHTHERIA.

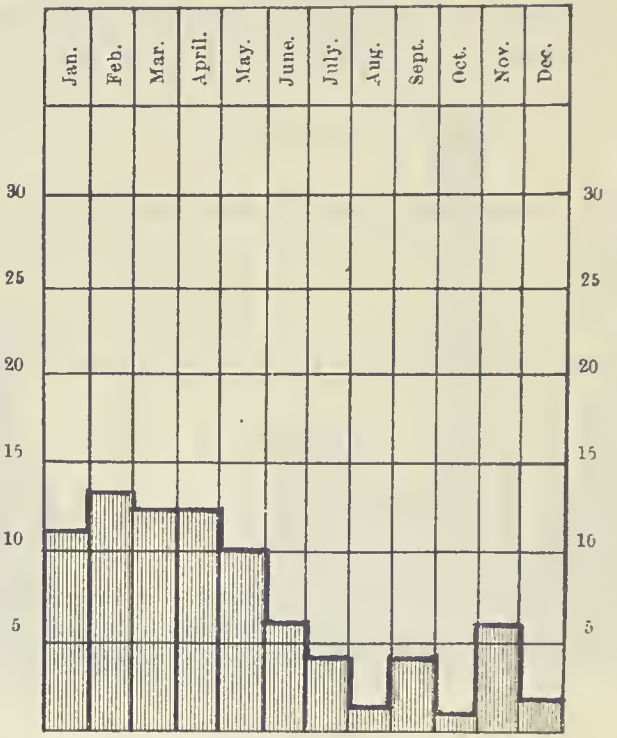
Chart showing the Number of Cases of Diphtheria during the past Twenty-Five Years.



As is evident from the foregoing chart, Diphtheria was epidemic in the City during the years 1910-1912, and again in 1915-1916. Since the latter year there was, with the exception of 1919 and 1920, a continuous decline, reaching in 1925 a number which was the lowest yet recorded, viz., 11. In 1926 the number showed a slight increase, viz., 17. Since then there has been a continued increase. This year the number of cases reported was 83 as compared with 110 in the previous year.

The average monthly notification was 7, but this figure was only reached in the first half of the year. During the first six months of the year the average monthly number was 10, whereas in the last half of the year only 19 cases, or 22 per cent. of the total, were reported. The maximum monthly notification, viz. 13, occurred in February.

CHART SHOWING THE NUMBER OF CASES OF DIPHTHERIA DURING THE YEAR 1931.



Most of the cases occurred during the period February to April when 47 cases occurred. The largest number of cases occurred in the month of February when 13 cases were reported, followed by March and April with 12 cases. No month escaped, and in the months of October and August there were 1 and 2 cases respectively.

As regards the Ward Distribution, Ward 1 was the lowest with 1·7 per 1000, followed by Ward 5 with 2·2 per 1000. Ward 3, followed by Wards 4 and 6, had the highest. The figures relating to the various Wards for 1931 are as under :—

	Cases.	
Ward 1	11	or 1·7 per 1000.
Ward 2	17	or 2·4 ,,
Ward 3	16	or 2·7 ,,
Ward 4	14	or 2·6 ,,
Ward 5	16	or 2·2 ,,
Ward 6	9	or 2·6 ,,
	83	

Females were more affected than males, the figures, out of a total of 83 cases, being 48 and 35 respectively.

With reference to the age period, 12 cases occurred in children under 5 years of age, representing 14 per cent. of the total cases.

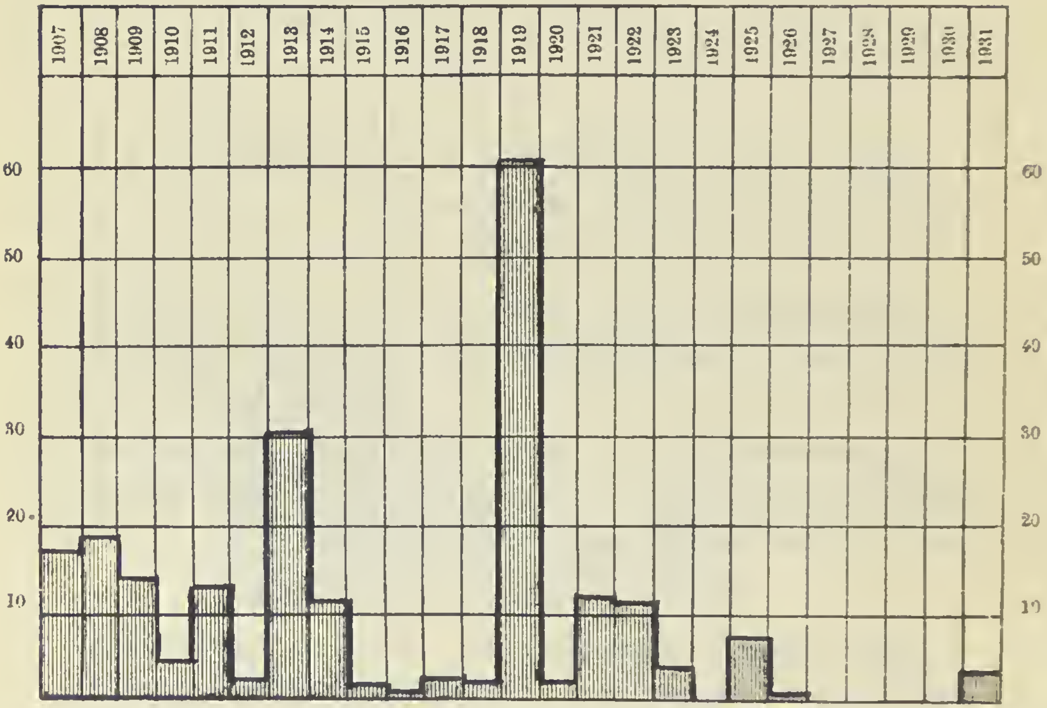
As regards the other age periods, 53 or 63 per cent. occurred between 5 and 15 years, 12 or 14 per cent. between 15 and 25 years, and 6 or 7 per cent. between 25 and 45 years.

Three deaths occurred from this disease during the year, one taking place between 1 and 5 years and the other two between 5 and 15 years of age. Last year deaths numbered 2.

This brings out the percentage of deaths to notifications as 3·6, and shows a somewhat higher mortality, and comparing with 1·8 in 1930 and 2·7 in 1929. The number removed to the Isolation Hospital was 76, or 91 per cent, as compared with 92 in the previous year.

TYPHOID FEVER.

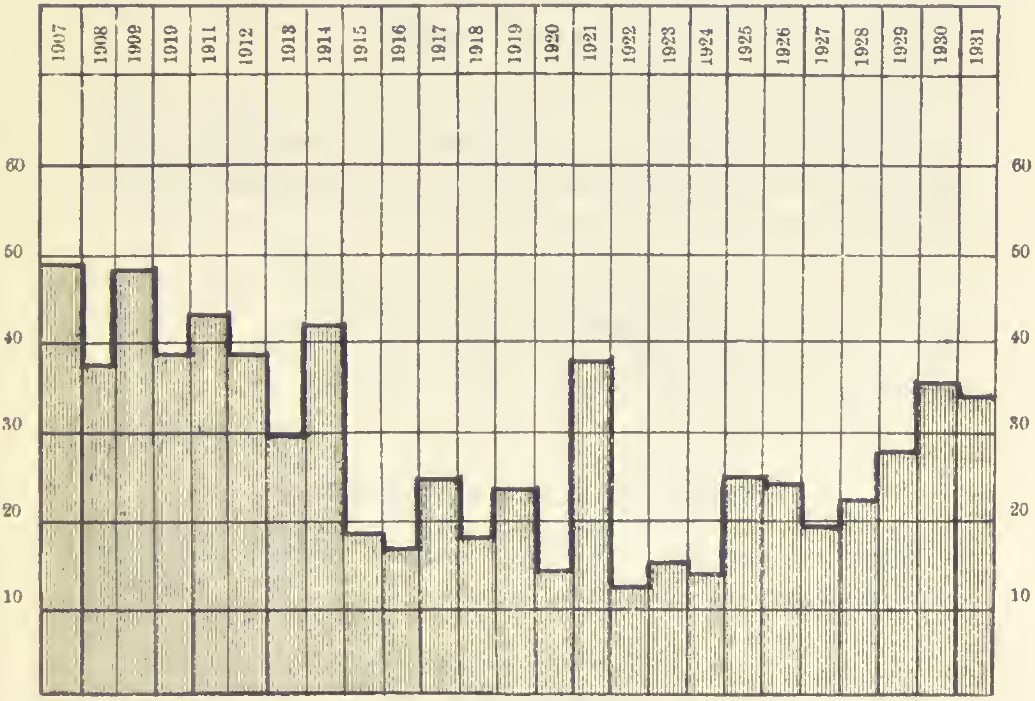
Chart showing the Number of Cases of Typhoid during the past Twenty-Five Years.



After a freedom from Typhoid Fever for the past four years, three cases fall to be recorded this year. The cases occurred in April and May and in different Wards of the City. Enquiry failed to trace the source of infection and a report on the examination of the Town's water supply was satisfactory. The last case occurred in October of 1926.

ERYSIPELAS.

Chart showing the Number of Cases of Erysipelas during the past Twenty-Five Years.



This disease showed a slight decrease during the year, 34 cases as compared with 36 in 1930, being notified. As is usual with the disease, the great majority of the cases were among people well up in years, 10 occurring in persons from 25 to 45 years of age, 14 from 45 to 65 years, and 8 over 65 years, the oldest age being 79 years. One case occurred in an infant.

It is only under exceptional circumstances that such cases are removed to Hospital—such, for instance, as residing in a caravan or lodging-house, or where it is impossible for the affected person to get the attention necessary. No case is removed for fear of the disease affecting others—apart from surgical or maternity cases. Seven cases were treated in Hospital, representing 20 per cent. of the total cases.

PUERPERAL FEVER.

Eight cases of this fever, including 3 cases of Puerperal Pyrexia, were reported during the year, as compared with 13 in 1930. Three of these cases terminated fatally, one taking place at home and the others at the Royal Infirmary.

CEREBRO-SPINAL FEVER.

No case of this disease occurred during the year.

ENCEPHALITIS LETHARGICA.

There was one case of Sleeping Sickness reported during the year, which terminated unfavourably.

DYSENTERY.

No case was notified during the year, as compared with one in 1930.

INFECTIVE JAUNDICE and MALARIA.

No cases of these diseases were reported.

SMALLPOX.

No case of this disease occurred during the year, and it is now several years since this disease was present in the city.

CITY HOSPITAL, EDINBURGH ROAD, PERTH.

Return of Patients for the Year 1931.

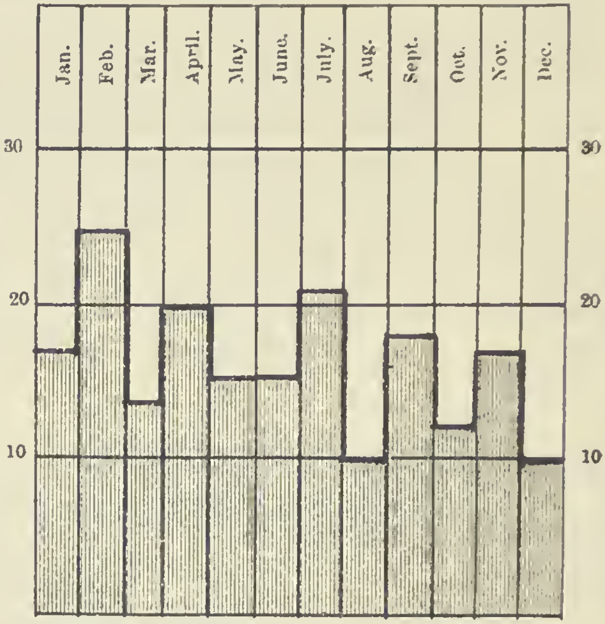
DISEASE.	In Hospital at end of 1930.	Admitted	Discharged.	Died.	Remaining in Hospital.	Age of Patients Admitted.	
						Under 5 years.	Over 5 years.
Scarlet Fever ...	9	59	58	...	...	13	46
Diphtheria ...	15	75	86	2	2	11	65
Typhoid Fever	...	3	3	. .	...	...	3
Erysipelas ...	...	7	6	1	...	...	7
Puerperal Fever	...	3	3	...	...	...	3
Whooping Cough	...	1	...	...	1	1	...
Measles ...		12	7	...	5	9	3
Ophth. Neon. ...	...	2	2	...	...	2	..
Phthisis ...	...	16	9	5	2	...	16
Tuberculosis ...	...	6	3	2	1	2	4
Pneumonia ...	...	1	...	1	...	1	...
Observation ...	...	2	1	1	...	1	1
Total Zymotic Cases	24	187	188	12	11	40	148

The total number of admissions during the year 1931 was 188, as compared with 235 in the previous year; and the number admitted since the opening of the Hospital on 30th October, 1906, is 5168.

There have thus been 47 less cases admitted than in 1930. The greatest number ever admitted in one year was 488, and this occurred in 1925, closely followed in 1924 with 471.

The average monthly number admitted was 15, but there was considerable variation in the numbers throughout the year. Thus the average monthly number admitted during the first quarter of the year was 18, second quarter 16, third quarter 16, and fourth quarter 12. The greatest number admitted in any one month was 24 in the month of February, and the least number was in August and December, viz., 10.

Chart showing the Monthly Admission of Cases for the Year 1931.



The number of Scarlet Fever cases was 59, and is 37 less than in 1930.

The average stay in Hospital of the Scarlet Fever cases was the same as in the previous year, viz., 33 days. The detention in Hospital over four weeks was in nearly all instances the result of ear or nose discharges, of which there were a considerable number.

In 1919 the average stay in Hospital was 35 days, previous to which it was 6 weeks. In 1920 = 32 days, 1921 = 28 days, 1922 = 24 days, 1923 = 23 days, 1924 = 32 days, 1925, 1926, 1927 = 37 days, 1928 = 32 days, 1929 = 31 days, 1930 = 33 days, while this year it was also 33 days.

Of the 59 discharged cases—1 was in a period of 2–3 weeks; 22, 3–4 weeks; 20, 4–5 weeks; 7, 5–6 weeks; 4, 6–7 weeks; 2, 7–8 weeks; 2, 8–9 weeks; and 1 over 10 weeks.

From figures like these, it is evident that the period of stay in hospital is an unfixed quantity, and that the popular view of six weeks detention is both a minimum and maximum period necessary for isolation is an erroneous one. Every case must be judged by itself. By the procedure carried out at the hospital during the past 9 years, the public have now been educated to the fact that many cases cease to be infectious as early as four weeks or less. The shortest period was 20 days and the longest 75 days. All cases recovered.

As regards Diphtheria, 75 cases were admitted during the year. This is 26 cases less than in 1930, but not one single month passed without the admission of a case into hospital. The largest number was admitted in February, viz., 12, followed by January with 11. In fact, the first quarter of the year was responsible for 33 cases, or 44 per cent. Many of the cases were of a severe type, yet, notwithstanding, the mortality was very low. The number of deaths from this disease was 2, one dying within a few hours of admission, and giving a case mortality of less than 3 per cent.

Erysipelas accounted for 7 cases and Puerperal Fever for 3. These figures are less than in previous years, more particularly in the case of the latter disease, of which 6 cases were treated in 1930. In view of the decision of the Royal Infirmary not to treat these cases in future, it is anticipated that those figures will increase, more particularly as Puerperal Pyrexia is now notifiable.

The number of tubercular cases was considerably more than that of the previous year, when only one case was treated. Owing to the Convalescent Block being once more available for the treatment of tubercular cases, no less than 16 cases of Phthisis and 6 cases of Tuberculosis were admitted. This is the largest number yet dealt with in one year. Many of the former were advanced cases and five died, while of the latter 2 succumbed.

The total number of deaths in the Hospital from all diseases during the year was 12, 2 from Diphtheria and 1 from Erysipelas and Pneumonia and Cellulitis, and 7 from tubercular diseases, giving a mortality of 6·4 per cent. In the previous year deaths numbered 6, representing a 2·5 per cent. case mortality.

CITY HOSPITAL—FRIARTON.

The interior surfaces of the Scarlet Fever Block, Diphtheria Block and Phthisis Block were repainted, and several minor repairs have been carried out during the year upon the Hospital in general.

SMALLPOX HOSPITAL—SHORE.

Nothing beyond a few small repairs has been executed on this Hospital during the past year.

PUBLIC HEALTH ASSISTANCE.

The work of the Home continues on the same lines as the previous year. The only suggestion I have to make, is the appointment of a Dental Surgeon whose services could be requisitioned when required. I would also repeat a hope that the time may not be far distant when the Sick Wards will be transferred from Bertha Home and provision made outside its gates.

BERTHA HOME.

The following is the Report of the Visiting Medical Officer:—

A. The sufficiency of the accommodation provided for the various classes of inmates is ample; the inmates are medically inspected as required, and ordinary inmates admitted to sick wards when necessary.

B. Dietary.—The dietary of the inmates both in the house and sick wards is good and ample, quality and cooking good, and due attention is paid to sufficient variation.

C. Nursing.—The nursing staff and their accommodation is quite satisfactory. During the year the services of the night nurse, added during 1930, have been continued.

D. Medicine.—The supply of medicines and Medical Appliances is satisfactory.

E. Equipment.—The equipment of the sick wards with hot and cold water, screens, chairs, bed-rests, etc., is quite good and requires no alteration meantime.

F. BATHING.—The bathing of the sick and infirm cases is carried out under the supervision of the nurses weekly, cases not able to be bathed in the bathrooms are sponge bathed in bed.

G. The heating and ventilation of the sick wards are both satisfactory.

H. The Sanitary arrangements of the Poorhouse are quite good.

I. No suggestions as to any alteration of the sick wards at present.

J. Cases of Itch, and offensive cases are isolated in the small wards at the gate and treated there. Cases of tuberculosis are dealt with by the Medical Officer of Health, and any cases of infectious disease which may occur are passed on to that department of the Local Authority.

K. Cases of venereal disease are passed on to the local V.D. Department at Perth Royal Infirmary.

L. Cases requiring operation are admitted to the Perth Royal Infirmary.

M. Operable cases of cancer are sent to the Royal Infirmary, advanced cases are isolated in the wards at the gate.

N. All obstetric cases are carefully examined on admission and are kept under supervision until labour comes on, when the case is transferred to the Maternity Wards of the Perth Royal Infirmary under an arrangement made during the year, resulting from the negotiations mentioned in the Report for 1930.

J. CAIRNS CHRISTIE.

RETURN OF PATIENTS IN THE SICK WARDS.

	In Wards at end of last Year.	Admitted during Year.	Discharged	Died	Remaining in Wards at end of Year.
Male, -	29	99	72	30	26
Female,	29	60	43	17	29
Total, -	58	159	115	47	55

RETURN OF OUT-DOOR MEDICAL ASSISTANCE.

Remaining on List at end of last Year.	Added during Year.	Recovered	Died.	Remaing on List at end of Year.	Consultations.	Visits.
12	292	250	4	40	788	304

RETURN BY NURSE FOR THE YEAR 1931.

Initial Visits, ...	358
Revisits	792
Total, ...	1150

HOSPITAL and AMBULANCE FACILITIES.

Royal Infirmary (Voluntary),
162 beds of which 29 private beds and 34 in Children's Ward.
22 Maternity beds and 20 cots.

184

St. Johnstone Nursing Home (Private).	13 beds
Craigie Nursing Home (Private).	6 beds
Home for Babies, Melville St. (Voluntary).	8 cots

City Hospital (Infectious Diseases).

	Beds.	Cots.		
Scarlet Fever	34	8	=	42
Diphtheria	10	8	=	18
Typhoid	6	0	=	6
Observation	4	0	=	4
Convalescent	12	0	=	12
	66	16	=	82

Smallpox Hospital (including cots).	22 beds
Bertha Home (P.H.A.). Sick Wards ... =	50 beds

With reference to the treatment of Tuberculosis, cases requiring active treatment are dealt with at the Royal Infirmary. Other cases are provided for in one or other of the following Institutions. Noranside Sanatorium, Glenlomond Sanatorium, Hillside Home, City Hospital and Bertha Home.

The out-patient department provided by the Local Authority are in connection with Child Welfare, and Ante-natal and Tuberculosis consultations held at the Centre every Tuesday and Thursday afternoons.

AMBULANCE FACILITIES.

For non-infectious and accident cases the St. Andrew's Ambulance Association provides two Motor Ambulances, while for the conveyance of infectious cases a Motor Ambulance is always in readiness at the Fire Station.

MATERNITY AND CHILD WELFARE CENTRE.

Committee.

President—Mrs. HOWMAN.
Vice-President—Miss MAXTONE GRAHAM.
Hon. Secretary—Miss M'NAB.
Hon. Treasurer—Mrs. VASS.

Lady GEORGINA HOME DRUMMOND.
Mrs. LINDSAY.
Mrs. J. RITCHIE.
Mrs. THOMSON.
Mrs. FALCONER.
Mrs. M'INNES.
Miss WILKINSON.
Miss MURDOCH.
Miss DUNCAN.
Mrs. DEMPSTER.
Mrs. MOWAT WILSON.
Mrs. LITTLE.
Mrs. J. WOOD.
Mrs. WALMESLEY.
Mrs. JAMIESON.

Voluntary Workers.

Miss BUCHAN.
Mrs. CARGILL.
Mrs. ROSS.

This Institution has now been in existence for 14 years, and it is pleasing to record another year of progress in this branch of Health Work. There can be no doubt that the results of health visiting are splendid ; even if they do not bear fruit at the moment they certainly do so in a short period. There is no desire to relieve parents of the responsibility for the care of their children, but as the mothers become better instructed, and as they leave some of their ignorance and antiquated ideas behind, so will there be a reduction in the Infantile Mortality.

The most important factor in the health of the infant is not the surroundings of the infant or the exact character of the milk, as the intelligent care of the mother. This intelligent care includes many things, such for example as cleanliness as regards the feeding bottles, the milk, the quantity of food given, suitable clothing, fresh air, &c.

Ignorance and lack of intelligence are two of the great evils which we have to contend against, and the experience of the Centre is that mothers are gradually becoming more willing to change from their old ways of feeding and managing their infants than they used to be. So far is this the case that mothers, attending the Centre with their second babies, are much more alive as to how to look after them than they were when they came with their first baby.

That the mothers appreciate the efforts of the Committee of management is fully borne out by the attendance during the past year. Ten years ago these averaged 177 per month, as compared with 484 per month this year. This continued success is in great measure due to the Lady Voluntary Workers and the Health Visitors, who continue to be a tower of strength to the Institution. Perth is fortunate in its Ladies' Committee, of which Mrs. Howman, Edendale, is President, and Miss M'Nab, Secretary, and whose members not only take a keen personal interest in the movement, but put that interest to much practical good.

The Sewing Class, which was begun late in 1919, has continued to be one of the most seccessful branches of the Centre's work. The attendance of mothers on these afternoons has been very gratifying. They have not only learnt to make cast-off garments into useful baby articles, but to make most serviceable articles out of most unlikely things. The ladies responsible for the conducting of this class were Mrs. Cargill, Westfield, and Misses Gellatly, Rose Crescent, to whom a mead of thanks is due. The garments cut out during the year numbered 240, and many articles of the mothers' workmanship were exhibited in the windows throughout the year.

Five years ago a "Baby Basket" scheme was inaugurated by the Ladies' Committee on behalf of necessitous cases. These are given gratis, and means the giving of woollies—two to three garments constituting a basket. During the past year 180 garments were given.

The Centre consists of a hall (where perambulators are stored), a waiting room, a weighing room and a doctor's consulting room. It is situated in an ideal place for its purpose, but there are occasions when its capacity is overtaxed, as can be judged when it is stated that one afternoon the attendance of mothers and children was over 80. As matters stand there are no means of increasing this capacity and the question of acquiring new premises has been under the consideration of the Town Council. A proposal was, to occupy the site situated between South Street and Canal Street on ground belonging to the Council and ground which it would be necessary to acquire from the Trustees of the late Neil Gow. The building would include a large waiting hall with lavatory accommodation, nurses' room, committee room, doctor's room, kitchen and heating chamber. The front of the building would face south and an open verandah extend along that side as well as at the entrance on the east side. Approximately the cost would be £2500. No definite decision has been reached.

Another important feature which has continued to meet with success is the Savings Bank. This branch is under the able superintendence of Mrs. Yass, Benview, Mrs. Ritchie, Rockbank and Miss McNab, Fitzroy Terrace. Anything from a penny upwards is received, and the mother is free to take any or all whenever she desires. The number of depositors during the year was 162, being an increase of 3 over the previous year, and the sum deposited £11 11/. Money was withdrawn to the extent of £14 2s. 7d. In all instances the money was withdrawn, especially in May and November, for payment towards rent or to meet doctors' expenses or to make purchases from the Work Stall which is under the superintendence of Mrs. Lindsay. It may be stated that these goods are the work of the Needlework Guild. This Guild consists of 50 members, of whom Mrs. Thomson, Magdalene Bank, is Convener. It has rendered most valuable work, and a work highly appreciated by the mothers. Ordinarily, every article is sold to the mother at the bare cost of material. Thanks are also due to many of the Church Work Parties and friends who contributed many serviceable articles of clothing.

The number of depositors in the first year was 66, and the number on the roll at the end of 1930 was 159. The following is a record of the year's work :—

Balance at 31st December, 1930, ...	£18	16	6½
207 Deposits lodged during 1931, ...	11	11	0
	£30	7	6½
28 Withdrawals during 1931, ...	14	2	7
Balance at 31st December, 1931, ...	£16	4	11½

Of this balance, there had been placed to the Savings Bank Central Fund (baby bank) the sum of £2. When baby's bank account reaches £1, this is placed into a personal Savings Bank Book. This book is kept at the Centre until the child reaches school age. During the year, for the first time since the Centre opened no personal Savings Bank Book was opened. This was entirely to be attributed to unemployment which hit the bank very badly, but to the mother's credit, unless circumstances made it absolutely essential, baby's bank book remained untouched, and even then a shilling was left in order to keep the bank account open.

On January 28th, a most successful tea party to the mothers, toddlers and babies attending the Centre was arranged by the Ladies' Committee. The attendance exceeded 400, and the function was much enjoyed. Several members of the Ladies' Committee, along with friends, contributed in a large measure towards the success of the function, while special mention must be made of Miss Smith and her juvenile girl dancers, and Miss Murdoch, Miss Duncan, Mrs. Scott-Pearce, and Mrs. Bruce, Murthly, who were responsible for the decoration of the platform and the Christmas tree.

On 1st July, Lady Georgina Drummond once more showed her kindness by inviting the mothers and babies to the grounds at Hamilton House, and mothers, toddlers and babies to the number of 400 spent a happy afternoon.

The average attendance of mothers and babies at the Centre was 489 per month, as compared with 484 in 1930, and an average of 409 in the previous five years, while the attendances at the Sewing Class held from October to March numbered 443.

The number of medical consultations at the Centre during 1931 was 363, as compared with 327 in 1930. The variety of illnesses can best be gathered from an examination of the statistics given later in the report. The number of vaccinations done was 39.

MIDWIVES (SCOTLAND) ACT, 1915.

(1) *List of the Midwives* (with their Names in alphabetical order, Enrolment Numbers and Addresses) who have up to 31st January, 1932, given notice under Section 18 of their intention to practice in the District.

Reg. No.	Name.	Address.
2228	Mary B. Barclay,	32 Caledonian Road.
804	Hannah B. Clarke,	33 Scott Street.
5182	Margaret Dickson,	2 Robertson's Buildings.
4323	Margaret M'Gregor Doig,	2 Florence Place.
1898	Elizabeth Laing,	20 Market Street.
578	Isabella H. Mackay,	Braehead, Jeanfield.
4014	Lilias Moncrieff,	36 Jeanfield Road.
2479	Annie Robertson,	18 Watergate.
3175	Margaret Williamson,	30 South Street.
6148	Catherine Whytock,	58 Scott Street.

(2) Births in Area or District.

Total Number of Births during 1931.	Total Number of Deaths of new-born children (within ten days) during 1931.	Actual Number of Births attended by Midwives during 1931.	Actual Number of Deaths of new-born children (within ten days) occurring in the practice of Midwives during 1931.	Actual Number of Cases not attended by a Doctor or Midwife during 1931.	
				Births.	Deaths.
614.	13.	51.	1.	—	—

(3) Cases of Ophthalmia Neonatorum.

Total Number of Cases during 1931.	Actual Number of Cases occurring in the practice of Midwives during 1931.	Actual Number of Cases occurring where confinement not attended by a Doctor or Midwife during 1931.
5.	—	—

(4) Cases of Puerperal Sepsis.

Total Number of Cases during 1931.	Total Number of Deaths during 1931.	Actual Number of Cases occurring in the practice of Midwives during 1931.	Actual Number of Deaths occurring in the practice of Midwives during 1931.	Actual Number of Cases occurring where confinement not attended by a Doctor or Midwife during 1931.	
				Cases.	Deaths.
8.	3.	—	—	—	—

(5) Cases of Still-birth (Dead Born).

Total Number of Cases during 1931.	Actual Number of Cases occurring in the practice of Midwives during 1931.
35.	2.

(6) **Cases of Emergency.**—The number of Cases of Emergency to which medical practitioners have been called in under Section 22 of the Act during 1931 was 4. These related to one case of prolonged labour, one of retained placenta, one of maternal weakness and one of cyanosed baby.

(7) **General Remarks.**—There is nothing special to record other than that the facilities now afforded at the Royal Infirmary to maternity cases, has

STATISTICS RELATING TO MATERNITY SERVICE AND CHILD WELFARE.

Infant Mortality.

(*a*) No. of deaths . 51 (*b*) Rate per 1000 births = 83

(*c*) Age Groups—

Under 1 week	19
1 week and under 4 weeks, ...	14
4 weeks and under 3 months	8
3 months and under 6 months	4
6 months and under 12 months	6

(*d*) Causes of Death—

Congenital Malformations	4	Enteritis	1
Whooping Cough ..	—	Premature Birth ...	14
Measles	—	Atrophy, Debility ...	9
Convulsions	1	Overlain	—
Bronchial Pneumonia	6	Injury at Birth ...	—
Pneumonia	1	Other Causes	12
Bronchitis	1		

Infantile Mortality is referred to in greater detail on page 13 of the Report.

Births.

(*a*) No. registered—Legitimate, 614 ; Illegitimate, 34.

(*b*) No. notified, 764. (1) Doctor, 713 ; (2) Midwife, 51.

(*c*) No. of Still Births, 35.

Maternal Mortality.

(*a*) No. of deaths from Miscarriage or Child Birth	—
(*b*) No. of deaths from Puerperal Sepsis	3

Home Visitation.

	Number visited.	Total Visits
(*a*) Infants	559	6117
(*b*) Children (1-5 years) ..	686	982
(*c*) Expectant Mothers	95	258
Total ...	1340	7357

Ante-Natal Consultations.

Clinics held twice weekly on Tuesday and Thursday, 3 to 4·30 p.m

(*a*) No. of attendances	4
(*b*) No. of first attendances	3
(*c*) Conditions found—	
Bad Teeth	1
Varicose Veins	—
Pregnancy	2

Post-Natal Consultations.

No. of attendances	18

Child Welfare Consultations.

(*a*) No. of attendances under 1 year	3040
,, ,, over 1 year	1306
(*b*) No. of first attendances under 1 year ...	280
,, ,, over 1 year ...	37
(*c*) Illnesses recorded—	
Bronchitis	15
Injuries	8
Hernia	12
Tongue-tied	15
Skin Diseases	35
Diarrhœa, Enteritis	24
Phymosis	7
Eye Diseases	7
Debility	7
Worms	6
Ear Diseases	10
Scabies, Tuberculosis, Bad Teeth, Incontinence, Suppurating Navel, of each ...	4

Oph. Neonatorum, Rickets, Whooping Cough, Boils, of each	3
Whitlow, Measles, Ganglion, Constipation, Congenital Malformations, of each ...	2
Dislocation, Fracture, Adenoids, Prolapse, Foreign Body, of each	1

Ultra Violet Light Clinic.

(Royal Infirmary).

No. of attendances	4267
No. of cases	251

Note of Conditions—Rickets, Tuberculosis, Marasmus, Skin Diseases, Pulmonary Diseases.

Day Nursery.

No. of attendances	2551

Charges—8d. per day; if two, 7d. each.

Income	£316	8	6
Expenditure	£295	1	7
Payments made by parents ...	£61	12	6

Food and Milk.

Gross cost £128 11 7 Sums recovered £9 4 1

No milk substitutes given.

Measles.

No. of deaths	—
No. treated in Hospital	12

Whooping Cough.

No. of deaths	2
No. treated in Hospital	1

Ophthalmia Neonatorum.

No. of cases notified by Doctor	6
No. of cases notified by Midwife	—
No. treated in Hospital	4
Appreciable loss of vision	1

Maternity Hospital.

(Royal Infirmary).

(1) Ante-Natal cases—

No of cases at Clinic	154
No. of cases treated	22

Statement of conditions found—

Conditions found	Cases	Result
Albuminuria of Pregnancy ..	8	successful
Eclampsia	4	,,
Accidental Hæmorrhage ...	3	,,
Hyperemesis Gravidarum ...	7	,,
Threatened Abortion ...	1	

(2) Abortions—

No. of cases	10
Results	successful

(3) Normal confinements—

(*a*) Total No. (1) With Medical assistance ...	—
(2) Without ,, ,, ...	275
(*b*) No. of deaths	1

(4) Abnormal or complicated confinements—

No. of cases	72

Conditions found	Cases	Result
Inertia and Prolonged Labour	44	successful
Placenta Prævia ...	6	,,
Face Presentation ...	1	,,
Breech ,, ...	10	,,
Hydramnios ,, ...	2	,,
Contracted Pelvis ...	1	,,
Accidental Hæmorrhage	1	,,
No. of Deaths	2	(*a*) Symphysiotomy (*b*) Caesarian Section

(5) Receipts from Patients £1023 15 6

(6) No. of infants born—

Alive	324
Still	27

No. of twins born—

Alive	4
Still	1

(7) No. of deaths of infants within a week ... 11

(8) No. of cases of puerperal fever 4

Removed from Institution 1

Educational.

Sewing meetings held weekly from October to March.
The number of attendances was 669.

V.D. CENTRE.

The Centre was opened in May, 1923. It is a one storey brick building, and has been erected adjacent to the Out-Patient Department of the Infirmary. Its accommodation consists of (1) Office, (2) Waiting Room, (3) Treatment Room, (4) Rest Room, and (5) Irrigation Room.

It acts as an Out-Patient Clinic, no provision being made for resident cases, and is for the use of both City and County, and the times for consultation are :—

County Patients :—Women—Monday, 3 to 4 p.m.
Men—Thursday, 3 to 4 p.m.

City Patients :—Women—Monday, 6 to 7 p.m.
Men—Thursday, 6 to 7 p.m.

The following is a record of the work done :—

VENEREAL DISEASES REPORT.

The following is a Record of the Work by Dr. Trotter for the Period 16th May, 1931, to 31st December, 1931, at the Perth Royal Infirmary.

	Syphilis.		Gonorrhœa.		Soft Chancre.		Mixed Infections.		Conditions other than Venereal.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F
Number of New Cases, ...	17	2	25	9	—	—	—	—	5	2	47	13
Number of persons who ceased to attend the Centre *after* completing the course of treatment, but before final tests, ..	3	—	—	—	—	—	—	—	—	—	3	—
Number of persons transferred to other Treatment Centres after treatment, ...	3	—	—	—	—	—	—	—	—	—	3	—
Number of persons discharged from the Centre, ...	6	1	24	6	—	—	—	—	5	2	35	9
Number of persons who, at the end of the year, were under treatment or observation, ...	26	13	6	5	—	—	—	—	—	—	32	18
Total attendances of all persons, ...	265	144	584	242		—	—	—	10	6	839	392
Do. do. do. in 1930,	469	295	770	90		—	—	—	18	7	1257	392

Area in which patient resided :	City Area.	County Area.	Other Scottish Areas.	TOTAL
Number of persons from each area dealt with during the year for the first time :				
(*a*) Syphilis, ...	16	3	—	19
(*b*) Gonorrhœa, ...	21	13	—	34
(*c*) Soft Chancre, ...	—	—	—	—
(*d*) Mixed Infections, ...	—	—	—	—
(*e*) Conditions other than Venereal, ...	5	2	—	7
Total, ..	42	18	—	60
Total number of attendances at Out-patient Department, ...	951	300	—	1251
Number of doses of Salvarsan substitutes,	200	180	—	380

Age of persons treated.	Syphilis		Gonorrhœa		Mixed Infections.		TOTAL.	
	M.	F.	M.	F.	M.	F.	M.	F.
(*a*) Under 1 year, ...	—	—	—	—	—	—	—	—
(*b*) 1 and under 5 years, ...	—	—	—	—	—	—	—	—
(*c*) 5 ,, ,, 15 ,, ...	1	—	—	—	—	—	1	—
(*d*) 15 ,, ,, 25 ,, ...	1	—	13	7	—	—	14	7
(*e*) 25 years and upwards, ...	15	2	12	2	—	—	27	4
Totals, ...	17	2	25	9	—	—	42	11
In 1930, ...	22	15	43	4	—	—	65	19

FACTORIES AND WORKSHOPS.

Many inspections were made during the year of the Factories and Workshops, including the Bakehouses, and some improvements effected. In 8 cases attention was directed to want of cleanliness, and to inefficient or defective sanitary accommodation and these were remedied.

Speaking generally, it must be said that the management of the Factories and Workshops is conducted in a manner whereby the interests of the workers in matters relating to their general health are well looked after, and I feel sure that Perth will compare favourably with any city in the kingdom.

There are three underground bakehouses in the Burgh; and in accordance with the Factory and Workshops Act of 1901 these were granted Certificates by the Local Authority, the requirements of the Act being fulfilled in all respects.

As certifying Factory Surgeon, I examined for fitness for employment in factory or workshop, a total of 112 young persons, or 76 less than the previous year. Of these 33 were males, and 79 were females. This shows as compared with the previous year a decrease of males employed of 6, and a decrease of females of 70. The figures for 1930 were 39 males and 149 females. All must have attained the age of 14 before being allowed to work.

During the year only two were rejected as unfit for work and were due to uncleanliness.

When I took over the inspection of new factory hands the number whom I used to reject annually was in the neighbourhood of 20, and in looking over past records I find that during the past 5 years the average number rejected on account of a verminous condition has been 3, as compared with an average of 15 in the previous 5 years. It will be granted that this is a marked improvement, and, as the previous year showed only one case I was hopeful that 1931 would record no case of rejection because of uncleanliness. And there is no reason why this should not be so. The cause is easily removable and implies a want of care and disregard for the most elementary laws of health. In every instance the cases occur among the girls, and all rejected cases are subjected to re-examination before being allowed to work. Poverty, bad housing, bad sanitation, it can be safely said render cleanliness a condition more difficult to obtain, yet they certainly are not a bar.

and one comes across cases of vermin infection where insanitary conditions do not exist. Broadly speaking the two main factors which have led to the improvement are bobbing of the hair and the education of the people.

1. INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspector.

Premises. (1)	Number of Inspections. (2)	Number of Written Notices. (3)
Factories (including Factory Laundries) -	12	—
Workshops (including Workshop Laundries)	108	8
Workplaces (other than Outworkers' premises)	—	—
TOTAL - -	120	8

2. DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars (1)	Number of Defects. Found. (2)	Remedied. (3)	Referred to H.M. Insp.
Nuisances under the Public Health Acts—			
Want of Cleanliness - -	4	4	—
Overcrowding - - -	—	—	—
Other Nuisances - - -	2	2	—
Sanitary Accommodation—			
Insufficient - - - -	—	—	—
Unsuitable or Defective -	1	1	—
Not separate for sexes -	1	1	—
TOTAL - -	8	8	—

HOUSING (SCOTLAND) ACT, 1930.

In last year's report it was stated that the Town Council estimated the number of houses necessary to meet the needs of the city as far as replacing houses unfit for human habitation, abating overcrowding, and meeting the normal growth of the population were concerned, was 374, and they hoped to provide within the next three years 254 houses to replace houses unfit for human habitation. The other requirements were to be reconsidered in the light of the new Census figures.

During the year two schemes were fixed up, and the work on 240 houses is now proceeding. One is at Riggs Road, comprising 6 2-apartment and 8 3-apartment tenement houses, a total of 14 houses; and the other at Edinburgh Road, embracing 76 flatted houses of 3 apartments, 24 flatted houses of 2 apartments, 12 of 3-apartment cottage type, and the following tenement houses:—24 2-apartment, 66 3-apartment, and 24 4 apartment, a total for the Edinburgh Road Scheme of 226. Some of these houses should be ready for occupation about June and the others in the autumn.

In addition to the Corporation houses, plans passed the Dean of Guild Court for 15 houses to be built by private enterprise. These were mostly 3-, 4- and 5-room houses of the bungalow type.

WATER SUPPLY.

Perth, in addition to supplying water to its own inhabitants also provides water for the district of Scone.

The number of reservoirs in service is five, Viewlands No. 1 (830,000 gallons), Viewlands No. 2 (12,500,000), Muirhall (1,800,000), and two at Burghmuir (each 2.000,000). The total capacity of these reservoirs is 19,000,000 gallons, and this, with a daily supply (for trade and domestic purposes) of about 2,500,000 gallons, indicates a storage of seven and a half days' supply.

The following statement is taken from the Annual Report of the Water Manager, for 1931 :—

The total quantity of water pumped in 1931 was 893,215,000 gallons, being a decrease of 26,282,000 gallons, as compared with the previous year.

The water supply by meter was 207,180,000 gallons, as compared with 220,496,000 in 1930. This shows a decrease of 13,316,000 gallons. In addition, 36,000,000 gallons are supplied by agreement.

The quantity of water used at the Swimming Baths was 3,146,000 gallons, an increase of 155,000 gallons as compared with 1930.

In other words a total of over 682,889,000 gallons of water have been used for domestic purposes. This implies a daily supply of 1,772,700 gallons, and, based on a population of 37,000, gives a daily supply per head of 47·9 gallons.

Muirhall Reservoir.

This reservoir was emptied for cleaning and overhaul on August 29 and put into service again on September 12, the district being supplied meantime through the bye-pass, which had been inserted earlier in the year.

In view of the length of time which has elapsed since the reservoir was last cleaned, it was an agreeable surprise to find that the sediment on the floor of the reservoir only amounted to a layer about an inch in depth.

The walls and bottom were thoroughly scrubbed, the screens repaired and fitted with new copper wire gauze and all ironwork cleaned and treated with Bitumastic Solution.

The water level recorder was transferred to a more suitable position.

No sign of settlement subsequent to the last repair to the north-west corner was found.

Woody Island Supply.

During 1931, the whole of the town's supply was drawn from the new intake at the Woody Island, and this being the first complete year's working of the new scheme, the results obtained are of especial interest.

Throughout the year, daily comparisons have been made of the raw River water, the water drawn from the Filters and water drawn from the Town's mains. These included records of colour, temperature and amount of oxidisable matter present. In addition, fairly complete chemical analyses were made monthly concurrently with the submission of samples for bacteriological examination.

The River level fluctuated continually throughout 1931. The lowest flow being during the month of September, when a minimum level of 2 ft. 7½ ins. was reached. The maximum occurred on June 15 when a height of 14 ft. 1 in. was registered on the Water House gauge.

The month with the lowest *average* level was September with a height of 2 ft. 10½ ins., while the highest was November when the average level was 6 ft. The mean level for the whole year was 4 ft. 4 ins. The above figures relate, of course, to the levels at "low tide." The peak of June 15 was reached *after* the tide had ebbed.

The chemical examinations showed that the quality of the water corresponded with the variations in the River level, the colour, amount of "oxidisable matter" in solution and amount of chlorine required to ensure sterilization, being lowest in September and highest in November.

The temperature of the river water, measured at a point opposite the Water House, varied from a maximum of 63°F on August 5 to 8, to a minimum of 30° (*i.e.* 2° below freezing point) on January 1.

The effect of the reservoirs in "smoothing out" variations in the quality of the water pumped into them is strikingly shown by the daily records. If the maximum colour of the water *entering* Viewlands Reservoir be taken as 100, the maximum colour of the water *leaving* the reservoir was 53. Similarly the amount of oxidisable matter in solution showed a reduction of 40% between the maxima of the inlet and outlet waters. The average colour of the water drawn from the distribution mains was 27 mm. on Burgess' scale. The average figure (1930) for London water (filtered) was 24 mm. So far as I can ascertain the average colour of Perth water is about the same as that of Loch Katrine.

BACTERIOLOGICAL RESULTS.

At the beginning of the year the Council were fortunate in securing the services of Dr. W. J. Tulloch, Professor of Bacteriology at the University of St. Andrews, as bacteriologist under Section 10 (2) of the Perth Water Act, 1926.

During the year 4 samples of water were submitted to Mr. Andrew Dargie, and 44 samples for examination to Dr. W. Tulloch, Professor of Bacteriology at the University of St. Anderws, who kindly gave the following general report on the year's results :—

REPORT OF WATER SUPPLY AT WOODY ISLAND.

During the year 1931 I have made regular bacteriological examinations of the Water Supply of the City of Perth, at approximately monthly intervals.

On each occasion four samples of water were submitted to scrutiny, these being as follows :—

1. Sample of Raw River Water.
2. Sample of Water after filtration and before chlorination.
3. Sample of the same (No. 2) immediately after chlorination.
4. Sample taken from the distribution system.

The object of examining these was to ascertain on each occasion first the state of the river water, secondly the efficiency of the filters, thirdly to control the process of chlorination so that one could be assured that it was adequate, without being excessive, and finally to examine the characters of the water on distribution throughout the City.

1. RAW RIVER WATER.

Naturally the bacterial content of the raw river water showed considerable variation, and was always highest in times of spate. Notwithstanding this variation, however, of the total number of bacteria per unit volume of river water, the content of colon bacilli remained fairly constant and high throughout the whole year, with but two exceptions, viz., May 5 and October 6, when it was exceptionally low.

The colon bacillary content of these samples was such that one could not advise that the water was suitable for human consumption without previous treatment. On the other hand the ratio of micro-organisms whose characters suggested a mammalian origin, to those whose features are associated with the presence of vegetable matter, was in all instances low, and this may be regarded as a satisfactory feature.

2. FILTERED WATER BEFORE CHLORINATION.

The examination of the filtered water clearly showed that the filters, apart from their mechanical cleansing properties, did much to reduce the bacterial content of the supply. Thus, taking an average for the year, it was found that the filters

(1) reduced the content of colon bacilli to about 1/20th ;

(2) reduced the content of bacteria from presumably mammalian sources to 1/5th ; and

(3) reduced the total count of bacteria to 1/16th of found that in the raw river water.

3. CHLORINATED FILTERED WATER.

In this, on no occasion, were colon bacilli found, even in 100 c.c. of the water, a finding which indicates that the chlorination was adequate and would render the water undubitably safe, so far as water-borne infection is concerned.

It is, however, equally important that the chlorination be not excessive, and the fact that micro-organisms were recoverable from the chlorinated water, on all but two occasions, November 3 and May 5, indicated that a remarkably suitable adjustment was the rule.

Regarding the two exceptions, I would call attention to the fact that on November 3 the water level was 7 ft. 3 ins., the river being in spate, and in such circumstances a slight excess of the chlorination might be well regarded as advantageous, for on this occasion the colon bacillary content of the filtered water was higher than usual.

I would consider, therefore, that good technique had been employed and sound judgement had been manifested by those responsible for the process of chlorination.

4. DISTRIBUTION AREA.

The results obtained in examining the water as distributed corroborate the opinion expressed above concerning its examination at once after chlorination. As distributed, the water is of a high standard of purity, as is shown by its low bacterial content, and by the fact that only on one occasion was the colon bacillus demonstrated in less quantity than 100 c.c., while on four occasions, April 7, May 5, June 2 and June 29, that micro-organism was not demonstrable even in 100 c.c.

It is worthy of note that the exceptional occasion when colon bacilli were recovered from 10 c c. of the water was on November 3.

The findings, therefore, show that although the raw river water has too rich a bacterial flora to constitute a safe source of water for domestic supply, its subsequent treatment by filtration and chlorination renders it safe and satisfactory in that regard.

I would lay special stress on the fact that the degree of chlorination, as shown by my examinations, is adequate and, what is equally important. is well controlled and not excessive.

7/1/32. (Signed) WILLIAM J. TULLOCH.

The samples have, with one exception, been taken on the first Tuesday in each month. They are thus in a sense "random" samples, and include samples taken in all states of the river between "summer level" and spate.

The average amount of chlorine used during 1931 was one part in 2 million or 24% less than during 1930.

VACCINATION (SCOTLAND) ACT, 1907.

Return of Statutory Declarations of Conscientious Objection delivered to the Registrar.

It will be noted from the table given below how, for a period of years, advantage was taken of the Conscientious Objection to vaccination, reaching a maximum in 1917 with a percentage of 34·8 unvaccinated. From that date the percentage gradually declined until 1920 to 21·2, but from that time to 1924 steadily increased. A decline set in for the next few years, but this year the percentage has again risen. I would like to see this percentage reduced to the figure of 1907, as I fear the greater the accumulation of unvaccinated children, the greater will be the epidemic should Smallpox get a foothold in the city. Notwithstanding, so far as I can gather, Perth compares most favourably with other Towns.

Year.	No. of Births.	No. of Unvaccinated.	Percentage of Unvaccinated.
1907	802	3	·3
1908	794	57	7·1
1909	805	92	11·4
1910	786	148	18·8
1911	760	163	21·4
1912	791	184	23·2
1913	711	209	29·3
1914	727	194	26·6
1915	644	213	33·0
1916	685	229	33·4
1917	516	180	34·8
1918	477	119	25·0
1919	614	144	23·4
1920	844	180	21·2
1921	646	145	22·4
1922	691	164	23·7
1923	704	174	24·7
1924	597	155	25·9
1925	562	124	22·1
1926	661	153	23·1
1927	602	123	20·4
1928	617	123	19·9
1929	551	121	21·9
1930	558	134	24·0
1931	614	180	29·3
Total	16759	3711	22·1

SLAUGHTER-HOUSE.

The Slaughter House was visited by me on one or two occasions during the year in order to ascertain the general sanitary conditions, and it can be reported that the premises were kept in satisfactory order. Reference was made, however, in previous reports to certain conditions which it was highly desirable should be remedied. The cost of reconstructing parts, repairing courts, etc., was, however, so great that the desirability of a new Slaughter House was discussed and agreed to.

Plans were prepared by Mr. M'Laren, Burgh Surveyor, and in design and equipment the Slaughter House will be second to none in Scotland.

The following statement was kindly furnished by Mr. M'Laren:—

"The rebuilding of the Slaughterhouse is now in progress and the Cattle and Sheep Slaughter Halls with the Waiting Lairage behind same have been completed. The loading passage, which is covered over, is also practically completed and is presently used for the hanging of carcases until the Cooling Rooms are finished. Two booths for Hide and Tallow merchants and Blood Room are also completed.

The work is now being proceeded with for the construction of the Piggery, Tripery, Boiler House, Manure Disposal Plant and Guttery. When this section is completed, Cooling Rooms for cattle and sheep carcases, Detention Room and Condemned Meat Booth, Superintedent's Office and Slaughtermen's Mess Rooms will be proceeded with. The whole work of reconstruction will be completed in 1932.

The walls of the Slaughter Halls are lined with white enamelled bricks and the rooflights are glazed with blue glass which breaks the rays of the sun and prevents, to some extent, flies collecting within the booths. Hot and cold water taps are laid on to each division in the Slaughter Halls and hose pipes are fitted on the walls at convenient intervals so that the enamelled surfaces and the floors can be thoroughly washed.

The provision of Stunning Pens for humane slaughter of animals is an important feature of the premises. Cattle are brought from the lairage behind into the Stunning Pen where they are screened off from the Slaughter Hall and there they are stunned. The bottom of the Stunning Pen is then dropped and the animal is discharged on to the floor in a position for bleeding and dressing.

The hoisting apparatus and the twin-bar runways from the Slaughter Halls throughout the premises are of great convenience compared with the old arrangement. The animals are brought into the lairage from behind by a separate entrance. At the north end of the buildings a range of pens will be provided for the accommodation of large numbers of sheep for the London market and also for animals that are not to be slaughtered for some days.

The buildings will be equipped with the most modern appliances, and when finished the plan will be found extremely convenient and the premises easily worked and cleansed.”

The cost of the abattoir will be about £21,680. However, the Unemployment Grants Committee are to meet 34% of the interest on a loan not exceeding £21,680 for 30 years, while the balance of the interest and the whole of the sinking fund will be met by local butchers, who have agreed to pay increased dues for the use of the abattoir, so the hope is there will be no charge against the ratepayers for the new buildings.

The number of animals slaughtered in 1931 was—

Cattle,	4547,	of which	21	were wholly	unfit and	33	partially.
Sheep,	27,021,	,,	59	,,	,,	4	,,
Pigs,	2163,	,,	3	,,	,,	3	,,
Calves,	89,	,,	2	,,	,,	0	,,

The weight of the condemned material was—Beef, 16,333 lbs.; Mutton, 2,334 lbs.; Pork, 646 lbs.; Veal, 227 lbs

During the year Mr. Brown, V.S., who was appointed for the purposes of Section 43 of the Public Health (Scotland) Act, 1897, was called by the Superintendent on several occasions. The following table gives a summary of the diseases and number of animals, either partially or wholly unfit for food.

	Ox	Cow.	Sheep.	Pig.	Calf.
Tuberculosis ..	17	15	—	4	1
Septic Conditions ...	1	2	7	—	—
Decomposition ...	—	2	20	—	—
Emaciation ...	—	—	3	—	—
Bruising	7	5	7	1	—
Pleurisy	2	—	1	—	—
Pneumonia ...	—	—	3	—	—
Dropsy	1	1	18	—	—
Other Conditions ...	1	—	4	1	1
Total ...	29	25	63	6	2